



July 8, 2020

Mr. Todd Davis
EPA Site Assessment Manager
U.S. Environmental Protection Agency, Region 7
11201 Renner Boulevard
Lenexa, Kansas 66219

Subject: Pre-CERCLA Screening Report
2422 5th Avenue South Former Dry Cleaner, Fort Dodge, Iowa
U.S. EPA Region 7 START 5, Contract No. 68HE0719D0001
Task Order No. 19F0086.005
Task Monitor: Todd Davis, EPA Iowa Site Assessment Manager

Dear Mr. Davis:

Tetra Tech, Inc. is submitting the attached Pre-Comprehensive Environmental Response, Compensation, and Liability Act Screening (PCS) report regarding the 2422 5th Avenue South Former Dry Cleaner site in Fort Dodge, Iowa. If you have any questions or comments, please call me at (816) 412-1777.

Sincerely,

A handwritten signature in black ink that reads 'Stephanie Caples'.

Stephanie Caples
START Project Manager

A handwritten signature in blue ink that reads 'Ted Faile'.

Ted Faile, PG, CHMM
START Program Manager

Enclosures

PRE-CERCLA SCREENING REPORT
2422 5th AVENUE SOUTH FORMER DRY CLEANER
FORT DODGE, IOWA

Superfund Technical Assessment and Response Team (START) 5 Contract
Contract No. 68HE0719D0001, Task Order 19F0086.005

Prepared For:

U.S. Environmental Protection Agency
Region 7
Superfund Division
11201 Renner Boulevard
Lenexa, Kansas 66219

July 8, 2020

Prepared By:

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1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) Region 7 Superfund Division tasked the Tetra Tech, Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) to assist with a Pre-Comprehensive Environmental Response, Compensation, and Liability Act Screening (PCS) at 2422 5th Avenue South Former Dry Cleaner site (site) in Fort Dodge, Iowa. This PCS, in response to public concern regarding possible threats to health and environment posed by the site, was conducted to determine if further Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) response would be warranted.

Tetra Tech's tasks included (1) review of existing and relevant documents associated with the site, and (2) completion of a PCS Checklist/Decision Form. Stephanie Caples was the START Project Manager, and the EPA Region 7 Iowa Site Assessment Manager was Todd Davis.

2.0 SITE LOCATION AND BACKGROUND

Section 2.0 describes the site and its location, reviews site history, identifies current land use, and discusses geology and hydrology in the site area.

2.1 SITE LOCATION AND DESCRIPTION

The City of Fort Dodge (City) is on the Des Moines River in Webster County, Iowa (Appendix A, Figure 1), and according to the 2010 census, had a population of 25,206 (U.S. Census Bureau 2020). The City supplies potable water to the population; however, many residing inside and outside of city limits obtain their water from private wells (Iowa Geologic Survey [IGS] 2020). The City has an economy primarily consisting of biofuels, livestock feed, gypsum and limestone mining, can production, drywall manufacturing, trucking, manufacture of veterinary pharmaceuticals and vaccines, and retail (Fort Dodge 2020). The City appears on 7.5-minute topographic quadrangle maps of Fort Dodge North, Iowa and Fort Dodge South, Iowa (U.S. Geological Survey [USGS] 2018a, b).

The approximately 0.94-acre site is on the eastern side of the City at 2422 5th Avenue South (Appendix A, Figure 2). The single-story building on the site was built in 1974 and features a shed north of the building and a paved parking lot. The site is surrounded by paved parking and commercial buildings including OneMain Financial to the north, Wells Fargo Bank to the east, La' James International College across the street to the south, and Nestlé Purina PetCare Company (NPPC) to the west. The immediate area surrounding the site is commercial, with residential buildings less than a mile to the north, south, and west. Global Positioning System (GPS) coordinates at the approximate center of the building addressed 2422 5th Avenue South are 42.50142 degrees (°) north latitude and -94.16390° west longitude.

2.2 SITE HISTORY

NewspaperArchive lists Eugene Hiskey as owner of the 2422 5th Avenue South address (NewspaperArchive 2020). There Rainbow Laundry and Dry Cleaning operated coin-operated dry cleaning and laundry services from approximately 1984 until 1992 (Appendix C, Document 2). Mr. Hiskey sold the property in 1994 to Sunshine Company LC (Webster County, Iowa 2020), and Sunshine Laundromat Deli and Tan (Sunshine Laundry) currently operates out of the building.

Tetra Tech found documentation of past investigations of the site on the Iowa Department of Natural Resources (IDNR) Contaminated Sites webpage (IDNR 2020). In 1992, the U.S. Environmental Protection Agency (EPA) inspected the site (Appendix C, Document 1) under Section 3007 of the Resource Conservation and Recovery Act (RCRA). The inspection revealed significant evidence

suggesting incorrect storage of hazardous waste in the form of tetrachloroethene (PCE) in the shed at the rear of the facility, possibly having resulted in impacts on the soil beneath the shed.

In 2008, NPPC retained Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) to conduct a Phase I Environmental Site Assessment (ESA) of the site (Appendix C, Document 2). NPPC was considering purchase of the property for additional facility parking. A subsequent Phase II ESA by Burns & McDonnell at the request of NPPC also occurred in 2008 (Appendix C, Document 3). The Phase II ESA included direct-push borings advanced at 10 locations (DP-1 through DP-10) for collection of soil and groundwater samples; two sub-slab vapor samples (SVP-1 and SVP-2) also were collected. The soil and groundwater sampling locations were in or near areas suspected to be along likely pathways of contaminant migration from the site. The sub-slab vapor samples were collected inside the laundromat.

Analytical results from the Phase II ESA indicated detections of PCE and its degradation products on the site at concentrations exceeding regional EPA screening levels for soils (DP-9/SB03 contained 22.1 milligram per kilogram [mg/kg] PCE), EPA maximum contaminant levels for drinking water (MCL) (DP-9/SB03 contained 2.130 milligram per liter [mg/L] PCE), and calculated screening levels based on EPA guidance for vapor intrusion (VI) (SVP-2/AR01 contained 630,000 microgram per meter cubed [$\mu\text{g}/\text{m}^3$] PCE) (Appendix C, Document 3).

IDNR requested additional investigation of the site under CERCLA in 2008 (Appendix C, Document 4). At the request of Sunshine Laundry, Barker Lemar Engineering Consultants developed a limited Site Assessment & Remedial Action Plan in 2010 (Appendix C, Document 5). The Action Plan included advancements of six borings that were to be converted to permanent monitoring wells (MW-1 through MW-6). MW-1 through MW-4 were constructed to a depth of 20 feet (ft) below ground surface (bgs). MW-1 encountered groundwater at 9.25 ft bgs; MW-2 encountered groundwater at 5.9 ft bgs; MW-3 encountered groundwater at 5.45 ft bgs; and MW-4 encountered groundwater at 6.13 ft bgs. MW-5 was constructed to a depth of 10 ft bgs and encountered groundwater at 5.4 ft bgs. MW-6 was constructed to a depth of 14 ft bgs and encountered groundwater at 6.43 ft bgs.

In response to IDNR's request, additional borings (WF-1 through WF-3) were advanced on the east neighboring property (Wells Fargo) in 2010. WF-1 contained 130 microgram per liter ($\mu\text{g}/\text{L}$) PCE; WF-2 contained 400 $\mu\text{g}/\text{L}$ PCE; and WF-3 contained 1,000 $\mu\text{g}/\text{L}$ PCE (Appendix C, Document 6). In 2011, four additional borings (PS-1 through PS-4) were advanced east of Wells Fargo, across South 25th Street, in the Long John Silver's parking lot (now Ja-Mar Drive In Restaurant) (Appendix C, Document 7).

Only two of the borings produced groundwater (PS-1 and PS-2) and both were non detect (ND). A round of sampling at the site occurred in December 2011 as part of an Extended Site Screening (ESS) (Appendix C, Document 7). At the time of the ESS in 2011, the plume did not appear to extend east of South 25th Street; however, contaminated groundwater was known to extend off site onto the Wells Fargo property. During the ESS the permanent monitoring wells were sampled again producing results of MW-1 ND for PCE; MW-2 790 µg/L PCE; MW-3 3,700 µg/L PCE; MW-4 ND for PCE; MW-5 190 µg/L PCE; and MW-6 110 µg/L PCE.

On August 28, 2014, the Contaminated Sites Section of IDNR collected another round of groundwater samples from the permanent on-site wells (Appendix C, Document 8). Analytical results from the 2014 sampling event indicated remaining presence of groundwater contamination at the site; MW-1 ND for PCE; MW-2 2,300 µg/L PCE; MW-3 was not sampled because it could not be found; MW-4 ND for PCE; MW-5 170 µg/L PCE; and MW-6 97 µg/L PCE. In September 2014, IDNR sent a letter to the current property owners summarizing IDNR's position regarding the site, emphasizing that on-site conditions had not changed significantly within the previous 5 years. Additionally, under current site use and conditions, IDNR would suspend any further requirements for continued monitoring (Appendix C, Document 8).

PCE and Its Use at the Site

The coin-operated machines at the site used PCE, also referred to as perchloroethylene or "Perc," as did many dry-cleaning operations during the mid-late 1900s following its introduction as a dry-cleaning solvent in 1934. By 1948, PCE had replaced carbon tetrachloride as the major chlorinated dry-cleaning solvent used in the United States (petroleum solvents still dominated overall). By 1962, dry cleaning operations accounted for 90 percent of the PCE used in the United States (State Coalition for Remediation of Drycleaners 2007). At one time, PCE had been mixed with grain protectants and certain liquid grain fumigants, but this was no longer approved by 1980 (Meister Publishing Company 1980). Currently, PCE is used as a degreaser for metal parts (Agency for Toxic Substances and Disease Registry 2020).

PCE is a chlorinated solvent with an ether-like odor. A likely carcinogen, it degrades to TCE (a known carcinogen), which degrades to the *cis* and *trans* isomers of 1,2 dichloroethene (DCE), and to 1,1 DCE. These daughter products eventually degrade to vinyl chloride. PCE has low to moderate mobility in soil and may leach slowly to groundwater. Its solubility in groundwater is slight (0.15 grams per liter [g/L]) at 25 degrees Celsius (°C), and its specific gravity is 1.62 (Centers for Disease Control and

Prevention 2020). PCE tends to accumulate at greater depths with increasing distance from the source area.

2.3 CURRENT LAND USE

According to Webster County property records, the site was purchased by the Sunshine Company LC in 1994 (Webster County, Iowa 2020). Sunshine Laundromat Deli & Tan currently operates at the 2422 5th Avenue South site.

2.4 GEOLOGY AND HYDROLOGY

Webster county is in the northwest portion of central Iowa within the Central Lowlands Physiographic Province. Wisconsin-aged glaciation occurred in central Iowa during three major advances across an area referred to as the Des Moines Lobe. Glacial till comprised of silt loam and sandy loam overlies Pennsylvanian and Mississippian bedrock. The irregular bedrock surface topography in this region varies considerably and ranges in elevation from 700 to 950 feet above mean sea level (amsl). Regional Pleistocene deposits vary in thickness from 100 to 300 feet, depending on the bedrock surface elevation (University of Iowa 2020).

The exposed geologic units in the Fort Dodge area include early Pennsylvanian shale and sandstone; late Mississippian dolomite, limestone, and sandstone; and Jurassic gypsum and redbeds (Iowa Geologic and Water Survey [IGWS] 2010). The City's bedrock geology is unique, including conglomerates, gypsum beds, and red beds of the Jurassic Fort Dodge Formation. The Fort Dodge Formation is part of the Upper Jurassic period and contains some of the most quarried bedrock units in Iowa due to economic viability of the high-quality gypsum exposed in the Fort Dodge area (Geological Society of Iowa [GSI] 2014).

Soils in Fort Dodge are composed of very deep, well-drained soils on foot slopes, alluvial fans, upland drainageways, treads, and risers on stream terraces. These soils formed in loamy colluvium or alluvium overlying coarse textured sediments (U.S. Department of Agriculture [USDA] 2006).

Fort Dodge is part of the Southern Groundwater Province (IDNR 2003). The Southern Groundwater Province is classified as a poor groundwater area in terms of sufficient quantity and quality. Municipal water wells in Fort Dodge are installed in sandstone and dolomite of the Cambrian-Ordovician Aquifer 1,500-2,000 feet (ft) below ground surface (bgs), and in the sandstone and dolomite of the Mississippian Aquifer at depths ranging from 100-300 ft bgs (Fort Dodge Water Department [FDWD] 2017). Domestic wells are typically installed in the Mississippian Aquifer, the Silurian-Devonian Aquifer, or the

Cambrian-Ordovician Aquifer. Domestic water well depths in the City range from 50-1,500 ft bgs (IGS 2020).

Groundwater flow in the Fort Dodge area is generally southwest toward the Des Moines River and regionally toward the south-southeast. The regional groundwater flow of the Mississippian Aquifer is to the south and discharges into the Des Moines River. Regional groundwater flow of the Silurian-Devonian Aquifer is to the southeast and discharges to several rivers including the Iowa, Winnebago, Shell Rock, Cedar, and Maquoketa rivers. Regional groundwater flow of the Cambrian-Ordovician Aquifer is to the southeast and discharges to the Mississippi River Valley (IDNR 2003). Groundwater flow at the site has been determined to the northeast and first occurs at a depth of 5.45 ft bgs.

(Appendix C, Document 5). The Des Moines River is approximately 1.25 miles southwest of the site. Two tributaries of the Des Moines River are near the site—Soldier Creek is approximately 1.5 miles north of the site, and Gypsum Creek is less than 1 mile southeast of the site (Appendix A, Figure 3).

3.0 PATHWAY EVALUATION

This section describes migration pathways of groundwater, surface water, soil exposure and subsurface intrusion, and air, and identifies obvious potential human and ecological targets.

3.1 GROUNDWATER MIGRATION PATHWAY

The City is served by a system of eight active water supply wells that are completed into the sandstone and dolomite of the Cambrian-Ordovician aquifer at depths ranging from 1,800 to 2,300 ft bgs, and into the sandstone and dolomite of the Mississippian Aquifer at depths ranging from 500 to 980 ft bgs (IGS 2020). Many of the wells are clustered around the point where Soldier Creek meets the Des Moines River. Other municipal wells are along Soldier Creek less than a mile north of the creek's intersection with the Des Moines River; on the Des Moines river less than a mile south of the intersection of the creek and river; and at other locations throughout the City. One municipal well lies northeast of the site within 1 mile of the site (Appendix A, Figure 3). Groundwater flow at the site has been identified to the northeast (Appendix C, Document 5). Groundwater flow in the Fort Dodge area is generally southeast toward the Des Moines River and regionally toward the southwest (IDNR 2003).

Groundwater sampling was not included with the PCS; however, groundwater samples have been collected during previous investigations as described in Section 2.2. As a result of the previous environmental sampling, a release has been confirmed and significant contaminant is known to remain on site (Appendix C, Document 8).

IDNR decided to suspend further requirements for continued monitoring in 2014 (Appendix C, Document 8). However, Tetra Tech recommends additional investigation into current site and contaminant conditions because (1) a municipal well (Appendix A, Figure 3) location less than a mile from the site is in the direction of site groundwater flow, and (2) site conditions possibly have changed since the last round of sampling. Moreover, the impact of the spill could be significant given that some municipal wells are in shallower bedrock aquifers comprised of karst materials (IDNR 2003).

3.2 SURFACE WATER MIGRATION PATHWAY

Review of the Fort Dodge, Iowa quadrangle topographic maps indicate that runoff from the site likely proceeds either southwest toward the Des Moines River or east-northeast toward Gypsum Creek, following the general topographic gradient. Most runoff would likely be captured by stormwater inlets near the property.

According to the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) System, no wetlands are present on the site (USFWS 2020). However, three wetlands are less than a mile from the site. The wetlands are classified as follows: a 1.3-acre freshwater forested/shrub wetland PF01c, a 0.99-acre freshwater emergent wetland PEM1c, and a 1.69-acre freshwater emergent wetland PEM1c. Two of the wetlands are northwest of the site, and one is southwest of the site.

Surface water sampling was not included with the PCS. However, a release to surface water is unlikely because the site is almost entirely covered with structures and a parking lot, runoff from the site would likely be captured by stormwater inlets, and previous contamination at the surface would have volatilized.

3.3 SOIL EXPOSURE AND SUBSURFACE INTRUSION PATHWAY

Soil sampling was not included with the PCS; however, soil sampling has occurred during previous investigations as described in Section 2.2. As a result of the previous environmental sampling, a release has been confirmed, and significant contamination is known to remain on site (Appendix C, Document 8). It is unclear if the original source area is intact or continues to impact groundwater on site.

Indoor air sampling was not included with the PCS; however, sub-slab VI samples have been collected during previous investigations as described in Section 2.2. As a result of the previous environmental sampling, a release has been confirmed, and significant contamination is known to remain on site that could impact indoor air quality inside the main building on the site and adjacent commercial properties (Appendix C, Document 8).

Tetra Tech recommends additional investigation of current site and contaminant conditions due to previously confirmed contamination in subslab soil on site and thus possibility of VI on the site and at other nearby properties. Additionally, site conditions may have changed since the last round of sampling, possibly affecting mobility of the contaminant.

3.4 AIR MIGRATION PATHWAY

Ambient air sampling was not included with the PCS. A release to ambient air is unlikely because contaminants in surface soil would be covered by buildings or the parking lot.

3.5 POTENTIAL HUMAN AND ECOLOGICAL TARGETS

Facility users include on-site workers, customers, and construction workers. Customers of the Fort Dodge public water supply are also potential targets if contamination continues to migrate off the site. Potential ecological targets in the form of wetlands exist within 1 mile northwest and southwest of the site. A release has been identified at the site, and as of 2014, significant contamination remained on site that could pose a threat to human targets. The site PCS Checklist/Decision Form is in Appendix B.

4.0 SUMMARY AND CONCLUSIONS

Objectives of the PCS were to: (1) review existing and relevant documents associated with the site, and (2) complete a PCS Checklist/Decision Form. A release of PCE to soil and groundwater has occurred, as documented in Section 2.2. Definitive exposure risk to humans has been identified during previous investigations, and additional assessment is warranted. No endangered or threatened species have been identified during assessment activities, as no environmental sampling has occurred as part of this PCS. Further CERCLA assessment is warranted at the site.

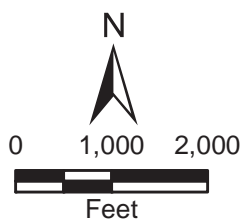
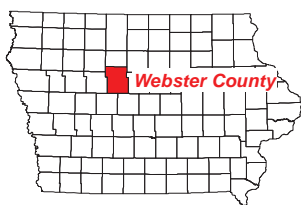
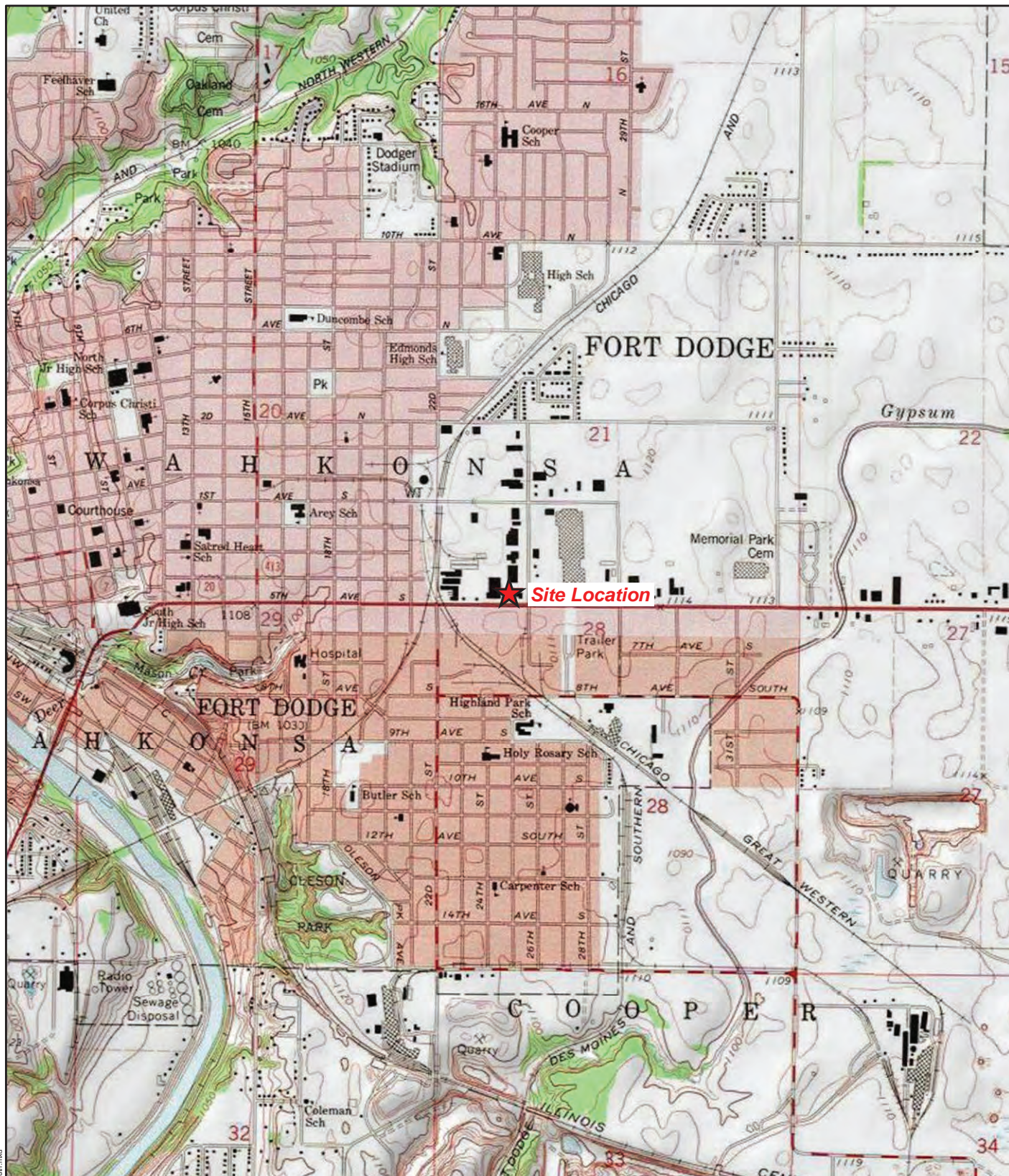
5.0 REFERENCES

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APPENDIX A

FIGURES



2422 5th Avenue South
Former Dry Cleaner
Fort Dodge, Iowa

Figure 1
Site Location Map



Source: Fort Dodge North, Iowa USGS 7.5 Minute Topo Quad, 1979;
Fort Dodge South, Iowa USGS 7.5 Minute Topo Quad, 1965

Date: 6/17/2020

Drawn By: Nick Wiederholt

Project No: X903019F0086.005



2422 5th Avenue South

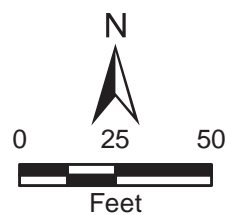
South 25th Street

5th Avenue South

20

Legend

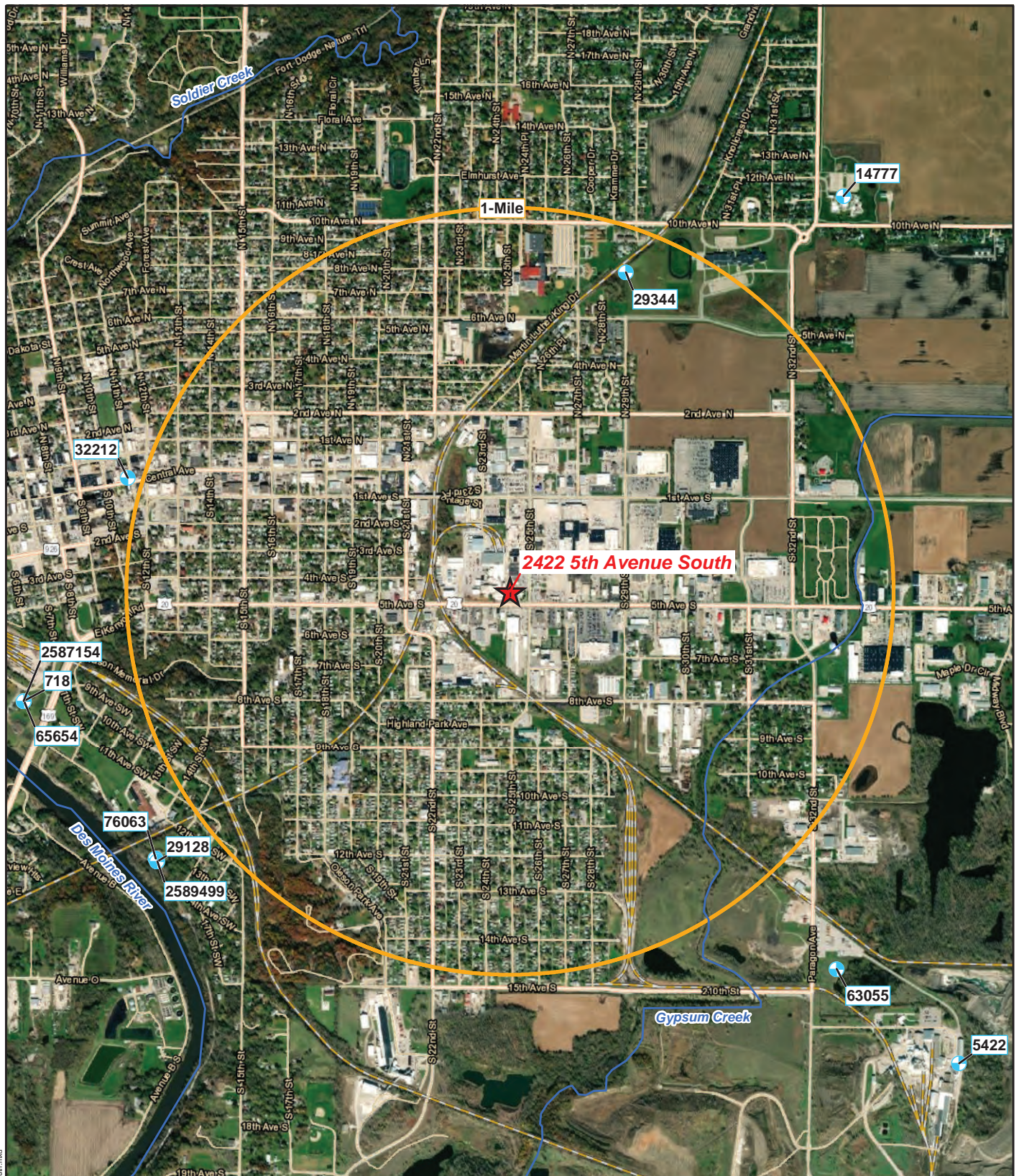
Former dry cleaner facility







2422 5th Avenue South
Former Dry Cleaner
Fort Dodge, Iowa

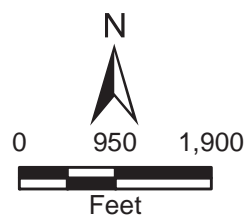
Figure 2
Site Layout Map





Legend

-  Dry cleaner facility
-  Municipal well location
-  Stream/river
-  1-mile radius ring



2422 5th Avenue South
Former Dry Cleaner
Fort Dodge, Iowa

Figure 3
Municipal Well Map



Source: Esri, ArcGIS Online, World Imagery, 2017; Esri, Data Maps, Named Streams and Rivers, 2007; Iowa Geodata, The Iowa Department of Natural Resources, All Registered Wells in the State of Iowa, 2019

Date: 6/17/2020

Drawn By: Nick Wiederholt

Project No: X903019F0086.005

APPENDIX B

PRE-CERCLA SCREENING CHECKLIST/DECISION FORM

Pre-CERCLA Screening Checklist/Decision Form

This form is used in conjunction with a site map and any additional information required by the EPA Region to document completion of a Pre-CERCLA Screening (PCS). The form includes a decision on whether a site should be added to the Superfund program's active site inventory for further investigation. This checklist replaces Attachment A in the December 2016 PCS Guidance document. A current version of the PCS checklist and additional information is available at: <https://www.epa.gov/superfund/pre-cercla-screening>.

Region: <u>7</u>	State/Territory: <u>IA</u>	Tribe: _____	EPA ID No. (If Available) _____
Site Name: <u>Sunshine Laundry, Fort Dodge</u>			
Other Site Name(s): <u>Rainbow Laundry & Dry Cleaning</u>			
<u>Former Sunshine Laundry</u>			
Site Location: <u>2422 5th Ave S</u>			
(Street)			
Fort Dodge	IA	WEBSTER	50501 - <input type="checkbox"/>
Congressional District	(City)	(State/Terr.)	(County)
(Zip+4) (No Zip Available)			
If no street address is available: _____			
(Township-Range) (Section)			
Checklist Preparer: <u>Stephanie Caples</u>		<u>06/15/2020</u>	
(Name / Title)		(Date)	
<u>Tetra Tech</u>		<u>(816) 412-1777</u>	
(Organization)		(Phone)	
<u>415 Oak Street</u>		<u>stephanie.caples@tetrattech.com</u>	
(Street)		e-Mail	
Kansas City	MO	JACKSON	64106_
(City)	(State/Terr.)	(County)	(Zip+4)
Site Contact Info/Mailing Address: _____			

CERCLA 105d Petition for Preliminary Assessment? <u>No</u> If Yes, Petition Date (mm/dd/yyyy): _____			
RCRA Subtitle C Site Status: Is site in RCRA Info? <u>Yes</u> If Yes, RCRA Info Handler ID #: <u>IAD981699259</u>			
Ownership Type: <u>Private</u>		Additional RCRA Info ID #(s): _____	
Site Type: <u>Other</u>		State ID #(s): <u>1216</u>	
Site Sub-Type: <u>Dry-Cleaning Operations</u>		Other ID #(s): _____	
Federal Facility? <u>No</u>		Federal Facility Owner: <u>(Make selection)</u>	
Formerly Used Defense Site (FUDS)? <u>No</u>			
Federal Facility Docket? <u>No</u>		If Yes, FF Docket Listing Date (mm/dd/yyyy): _____	
Federal Facility Docket Reporting Mechanism: <u>(Make selection)</u>			
Native American Interest? <u>No</u>		If Yes, list Tribe: _____	
		Additional Tribe (s): <u>(Make Selection)</u>	
		Additional Tribe (s): <u>(Make Selection)</u>	

Site Description

Use this section to briefly describe site background and conditions if known or (easily) available, such as: operational history; physical setting and land use; site surface description, soils, geology and hydrogeology; source and waste characteristics; hazardous substances/contaminants of concern; historical releases, previous investigations and cleanup activities; previous regulatory actions, including permitting and enforcement actions; institutional controls; and community interest.

Rainbow Laundry and Dry Cleaning (site) operated from 1986-1991. The property was sold in 1994 has been used from 1994 to present by Sunshine Laundry as a laundry. Iowa records state that no dry cleaning has occurred at the facility since 1994. The parcel occupies 0.94 acres on the northwest corner of 5th Ave. S. and S. 25th St. in Fort Dodge, Iowa. Exposed geologic units in the area include early Pennsylvanian shale and sandstone; late Mississippian dolomite, limestone, and sandstone; and Jurassic gypsum and redbeds. Municipal water wells in Fort Dodge are installed in sandstone and dolomite of the Cambrian-Ordovician Aquifer 1500-2000 feet (ft) below ground surface (bgs) and the sandstone and dolomite of the Mississippian Aquifer at depths ranging from 100-300 ft bgs. Domestic wells are typically installed in either the Mississippian Aquifer, the Silurian-Devonian Aquifer, or the Cambrian-Ordovician Aquifer. Domestic water well depths range from 50-1500 ft bgs. Groundwater in Fort Dodge flows in the direction of the Des Moines River which flows northwest to southeast through the city of Fort Dodge. +

Geospatial Information

Latitude: +42.50142 Longitude: 94.16390
 Decimal Degree North (e.g., 38.859156) Decimal Degree West (e.g., 77.036783)

Provide 4 significant digits at a minimum, more if your collection method generates them.

Except for certain territories in the Pacific Ocean, all sites in U.S. states and territories are located within the northern and western hemispheres and will have a positive latitude sign and negative longitude sign. Coordinate signs displayed above are based on the State/Territory entry on page A-1. Geospatial data tips from the PCS Guidance document are available [here](#).

Point Description: Select the option below that best represents the site point for future reference and to distinguish it from any nearby sites. See additional information [here](#).

- ☐ Geocoded (address-matched) Site Address
☐ Site Entrance (approximate center of curb-cut)
☒ Approximate Center of Site
☐ Other Distinguishing Site Feature (briefly describe):

Point Collection Method: Check the method used to collect the coordinates above and enter the date of collection. See additional information [here](#).

- ☒ Online Map Interpolation
☐ GPS (handheld, smartphone, other device or technology with accuracy range < 25 meters)
☐ GPS Other (accuracy range is ≥ 25 meters or unspecified)
☐ Address Matching: Urban
☐ Address Matching: Rural
☐ Other Method (briefly describe below):

Collection Date (mm/dd/yyyy): 06/15/2020

POINT-SELECTION CONSIDERATIONS

- Often the best point is a feature associated with the environmental release or that identifies the site visually.
- Use the curb cut of the entrance to the site if there is a clear primary entrance and it is a good identifier for the overall location.
- The approximate center of the site (a guess at the centroid) is useful for large-area sites or where there are no appropriate distinguishing features.
- Use the geocoded address if that is the only or best option available, but if possible use something more representative for sites larger than 50 acres.

Complete this checklist to help determine if a site should be added to the Superfund Active site inventory. See Section 3.6 of the PCS guidance for additional information.

	YES	NO	Unknown
1. An initial search for the site in EPA's Superfund active, archive and non-site inventories should be performed prior to starting a PCS. Is this a new site that does not already exist in these site inventories?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Is there evidence of an actual release or a potential to release?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Are there possible targets that could be impacted by a release of contamination at the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Is there documentation indicating that a target has been exposed to a hazardous substance released from the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Is the release of a naturally occurring substance in its unaltered form, or is it altered solely through naturally occurring processes or phenomena, from a location where it is naturally found?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Is the release from products which are part of the structure of, and result in exposure within, residential buildings or business or community structures?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. If there has been a release into a public or private drinking water supply, is it due to deterioration of the system through ordinary use?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. Are the hazardous substances possibly released at the site, or is the release itself, excluded from being addressed under CERCLA?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. Is the site being addressed under RCRA corrective action or by the Nuclear Regulatory Commission?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. Is another federal, state, tribe or local government environmental cleanup program other than site assessment actively involved with the site (e.g., state voluntary cleanup program)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Is there sufficient documentation or evidence that demonstrates there is no likelihood of a significant release that could cause adverse environmental or human health impacts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12. Are there other site-specific situations or factors that warrant further CERCLA remedial/integrated assessment or response?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Preparer's Recommendation: ☐ Add site to the Superfund Active site inventory.
☒ Do not add site to the Superfund Active site inventory.

Please explain recommendation below:

PCS Summary and Decision Rationale

Use this section to summarize PCS findings and support the decision to add or not add the site to the Superfund active site inventory for further investigation. Information does not need to be specific but, where known, can include key factors such as source and waste characteristics (e.g., drums, contaminated soil); evidence of release or potential release; threatened targets (e.g., drinking water wells); key sampling results (if available); CERCLA eligibility; involvement of other cleanup programs; and other supporting factors. Attach additional pages as necessary.

The PCS indicated that a release of PCE has occurred on-site as a result of leaking drums stored in the shed on the property. Previous soil, groundwater, and VI assessments indicate high levels of contaminant remain on-site. VI in the main building on the property and surrounding properties may pose a threat to human life. Further CERCLA assessment is warranted at the 2422 5th Ave S - Former Dry Cleaner site.

*The Site is already in SEMS as the Sunshine Laundry, Fort Dodge

Stephanie Caples

EPA contractor

06/15/2020

Checklist Preparer Name

Checklist Preparer Organization

Date

EPA Regional Review and Pre-CERCLA Screening Decision

Add site to the Superfund active site inventory for completion of a:

- ☐ Standard/full preliminary assessment (PA)
☐ Abbreviated preliminary assessment (APA)
☐ Combined preliminary assessment/site inspection (PA/SI)
☐ Integrated removal assessment and preliminary assessment
☒ Integrated removal assessment and combined PA/SI
☐ Other: _____

Do not add site to the Superfund active site inventory. Site is:

- ☐ Not a valid site or incident
☐ Being addressed by EPA's removal program
☐ Being addressed by a state cleanup program
☐ Being addressed by a tribal cleanup program
☐ Being addressed under the Resource Conservation and Recovery Act
☐ Being addressed by the Nuclear Regulatory Commission
☐ Other: _____

Optional- Print name of EPA Site Assessor making this decision: Todd H Davis

EPA Regional Approval: (Enter Date and then click this box to initiate digital signature stamp)

TODD DAVIS

Digitally signed by TODD DAVIS

Date: 2021.06.03 21:29:22 -05'00'

Date

Site Description*(All text as entered on page A-2)*

Rainbow Laundry and Dry Cleaning (site) operated from 1986-1991. The property was sold in 1994 has been used from 1994 to present by Sunshine Laundry as a laundry. Iowa records state that no dry cleaning has occurred at the facility since 1994. The parcel occupies 0.94 acres on the northwest corner of 5th Ave. S. and S. 25th St. in Fort Dodge, Iowa. Exposed geologic units in the area include early Pennsylvanian shale and sandstone; late Mississippian dolomite, limestone, and sandstone; and Jurassic gypsum and redbeds. Municipal water wells in Fort Dodge are installed in sandstone and dolomite of the Cambrian-Ordovician Aquifer 1500-2000 feet (ft) below ground surface (bgs) and the sandstone and dolomite of the Mississippian Aquifer at depths ranging from 100-300 ft bgs. Domestic wells are typically installed in either the Mississippian Aquifer, the Silurian-Devonian Aquifer, or the Cambrian-Ordovician Aquifer. Domestic water well depths range from 50-1500 ft bgs. Groundwater in Fort Dodge flows in the direction of the Des Moines River which flows northwest to southeast through the city of Fort Dodge. Groundwater flows from the site predominantly in a northeast direction. The Des Moines River is located approximately 2 miles away west-southwest of the site. PCE has been identified at the site as a result of leaking drums stored in the shed on the eastern portion of the site. Previous investigations include a Phase I and Phase II ESA conducted at the request of the RCRA branch of the IDNR. Results from past assessments indicated that soil and groundwater had been significantly impacted by the past release of PCE and there is potential for significant impact to indoor air in the on-site building. Soils, groundwater, indoor air, and outdoor air has been sampled on multiple occasions between 2008-2014. According to the final decision of the IDNR, significant groundwater contamination remains on-site.

PCS Summary and Decision Rationale*(All text as entered on page A-4)*

The PCS indicated that a release of PCE has occurred on-site as a result of leaking drums stored in the shed on the property. Previous soil, groundwater, and VI assessments indicate high levels of contaminant remain on-site. VI in the main building on the property and surrounding properties may pose a threat to human life. Further CERCLA assessment is warranted at the 2422 5th Ave S - Former Dry Cleaner site.

*The Site is already in SEMS as the Sunshine Laundry, Fort Dodge

APPENDIX C
RELATED DOCUMENTS



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
901 N. 5TH STREET
KANSAS CITY, KANSAS 66101

CON 12-15
Doc # 22023

FAX COVER SHEET

AIR AND WASTE MANAGEMENT DIVISION (AWMD)

TO: HYLTON JACKSON

PHONE #: _____ FAX #: 515-281-8895

FROM: _____

PHONE #: _____ FAX #: _____

SUBJECT: _____

TOTAL PAGES INCLUDING COVER: _____

COMMENTS: _____

DEC 17 1992

CERTIFIED MAIL

Return Receipt Requested

Article Number: P 679 713 977

Mr. Eugene Hiskey
Rainbow Cleaner
2422 5th Avenue
Fort Dodge, Iowa 50501

Re: Rainbow Cleaner
Fort Dodge, Iowa
EPA RCRA ID No. IAD981699259

Letter of Warning

Dear Mr. Hiskey:

On June 12, 1992, a representative of the U. S. Environmental Protection Agency (EPA) inspected your facility. The inspection was conducted under the authority of Section 3007 of the Resource Conservation and Recovery Act (RCRA).

A review of the inspection report by my staff indicates that the quantity of waste generated at the Rainbow Cleaners facility could allow the facility to be classified as a Conditionally Exempt Small Quantity Generator (CESQG) of Perchloroethylene waste and/or spent filters and still bottoms, a F002 waste.

The inspection conducted at your facility on June 12, 1992, revealed significant evidence to suggest that hazardous waste, specifically Perchloroethylene wastes and/or spent filters and still bottoms, were stored in a storage shed at the rear of your Fort Dodge facility. Also, there is strong evidence to suggest that these hazardous waste materials were disposed of by placing them in a trash dumpster in the same general area.

In accordance with Title 40 Code of Federal Regulations (CFR) § 261.5, a CESQG may dispose of hazardous waste at an off-site treatment, storage, or disposal facility which is permitted, licensed, or registered by a state to manage municipal or industrial solid waste (i.e. sanitary landfill). However, since the State of Iowa prohibits the disposal of any quantity of hazardous waste at facilities that are not approved to accept

RCRA:IOWA;MCKIDDY/SL-PS7866/disc-A/RAINLAUN.LTR/ja/12-4-92

IOWA-ARLP
MCKIDDY

IOWA
TRAN

IOWA
LAHM

IOWA
CALLIER

RMC
12/4/92

TT
12/14/92

AMK
12/11/92

JVC
12/16/92



R00159141

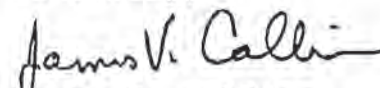
RCRA RECORDS CENTER

hazardous waste, any disposal of Perchloroethylene waste and/or spent filters and still bottoms with general trash constitutes a violation of the State requirements. You must identify and utilize another method of handling these wastes.

In addition, if all of the conditions specified at 40 CFR § 261.5 are not met, such generator becomes subject to full regulation under 40 CFR Part 262. We would like to remind you that you are responsible for maintaining compliance with all hazardous waste regulations at this facility and other facilities owned and/or operated by you. You may be assessed substantial penalties of up to \$25,000 per day per violation for not complying with the hazardous waste regulations.

If there are any questions regarding this matter, please contact Ms. Tran N. Tran at (913) 551-7058.

Sincerely,



James V. Callier
Chief, Iowa Section
RCRA Branch

CC: Pete Hamlin, IDNR

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Doc #19389

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EXECUTIVE SUMMARY

This Executive Summary Does not Fully Summarize Findings and Opinions
Findings and Opinions are Related Through the Full Report

Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) was retained by Nestlé Purina PetCare Company (NPPC) to conduct a Phase I Environmental Site Assessment (ESA) of Property located at 2422 5th Avenue South, Ft. Dodge, Iowa (the Property) as shown on the 1979 Fort Dodge North, Iowa United States Geological Survey (USGS) topographic map (Appendix A).

This assessment has been conducted in accordance with the scope and limitations of the American Society for Testing and Materials (ASTM) Standard *E1527-05* and the AAI Standard (40 CFR 312). Any exceptions to, or deletions from, this practice are described in Section 1.4 and 8.0 of this report. Burns & McDonnell visually surveyed the Property and adjoining properties from public points of view. Burns & McDonnell examined readily available environmental records associated with the Property and interviewed persons possessing knowledge of the current and former uses of the Property.

The Property consists of approximately 0.95 acres of land, as illustrated in Appendix A. There are two structures on the Property, which is occupied by Sunshine Laundry. The Property owner of record is Sunshine Company, LC. Burns & McDonnell's observations during the Site reconnaissance on January 22, 2008 indicate that adjoining properties are used for commercial and industrial purposes.

Burns & McDonnell reviewed historical records including historical aerial photographs of the Property from 1939, 1958, 1967, 1974, 1978, 1984, 1990 and 1995, historical USGS topographic maps from 1979, building permits and tax records. According to these historical records, the Property was first developed for use in 1974.

Environmental Data Resources, Inc. (EDR) provided a review of environmental database listings and identified 45 sites within the 59 databases it searched. The Property was identified in the RCRA Non-generators database, indicating that it has generated hazardous waste in the past, but does not currently generate any hazardous waste. EDR identified 27 sites (Orphan Sites) in the databases searched as having insufficient street information to locate them with respect to the Property. All of the Orphan Sites were determined to be outside the ASTM-defined search radii from the Property. Section 4.0 details the findings of the database review. A copy of the EDR database search report (The EDR Radius Map with Geocheck®) is provided in Appendix B.

Burns & McDonnell performed this Phase I ESA to identify *Recognized Environmental Conditions*, as defined in Section 1.1, associated with the Property and other issues that may not meet the definition of a *Recognized Environmental Condition* but that Burns & McDonnell considers potential environmental concerns with the Property.

RECOGNIZED ENVIRONMENTAL CONDITIONS

This Phase I ESA report has revealed no evidence of *Recognized Environmental Conditions* in connection with the Property, with the exception of the following:

- The Property is identified as Rainbow Laundry & Dry Cleaning by the City Directory search in 1986 and 1991. Documents provided by the EPA Region VII offices in response to a FOIA request indicate that dry cleaning operations were previously conducted on the Property. These operations are believed to have begun in approximately 1984 and continued until approximately 1992. An EPA Complaint Investigation inspection in June of 1992 found staining in the small shed currently on the Property and in/on an adjacent dumpster. Perchloroethylene was reportedly stored in the shed while awaiting disposal, as well as used filters associated with the drycleaning process. The manager of the facility at the time of the complaint inspection indicated that perchloroethylene had leaked from the buckets stored in the shed on some occasions. The facility received a letter of warning regarding the potential inappropriate handling of these wastes; however, no wastes were actually present on the Property at the time of the inspection. The history of the Property as a dry cleaning facility is considered a *Recognized Environmental Condition*.
- The EDR database search report indicated there is one ALLSITES sites listed within 0.5 miles of the Property. The Ferguson Trust site is located at 2503-2507 5th Avenue South, which is 0 to 0.125-miles east southeast of the Property. According to the EDR report, this is an AST site with a closed status. Additional documents relating to the Ferguson Trust site were obtained from the Iowa Department of Natural Resources (IDNR). These documents indicate that a filling station was formerly present on the site and that petroleum soil and groundwater contamination exist on the site. Groundwater monitoring has been conducted on the site and a No Further Action letter was issued in January 2001. However, benzene groundwater contamination still exists at the site. The groundwater flow direction reported at the site in the December 2000 groundwater monitoring report is to the northwest, thus making the Property potentially downgradient from this site. For these reasons, this site is considered a *Recognized Environmental Condition*.

HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS

This Phase I ESA has revealed no evidence of *Historical Recognized Environmental Conditions* in connection with the Property.

OTHER POTENTIAL ENVIRONMENTAL CONCERNS

This Phase I ESA has revealed the following potential environmental concerns in connection with the Property:

- Burns & McDonnell observed several stains on the concrete floor in the dryer equipment room. These stains appeared to be from leaking fittings on the dryer equipment. Due to the tight fit of equipment in this room, the entire floor area could not be directly observed. There is the potential that additional stains are present in this area. The presence of stains in this area is considered a *Potential Environmental Concern*.

* * * * *

1.0 INTRODUCTION

Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) was retained by Nestlé Purina PetCare Company (NPPC) to conduct a Phase I Environmental Site Assessment (ESA) of Property located at 2422 5th Avenue South, Ft. Dodge, Iowa (the Property) as shown on the 1979 Fort Dodge North, Iowa United States Geological Survey (USGS) topographic map (Appendix A). The Property consists of approximately 0.95 acres of land. The owner of record is Sunshine Company, LC.

1.1 PURPOSE

The purpose of this Phase I ESA was to identify *Recognized Environmental Conditions* associated with the Property from the current and historical usage of the Property. In addition, the evaluation includes the potential environmental impact on the Property from surrounding conditions or activities. Burns & McDonnell performed this Phase I ESA to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchase limitations on Comprehensive Environmental Response Compensation and Liability Act (CERCLA) liability (hereinafter, the “landowner liability protections” or “LLPs”): that is the practice that constitutes “all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice” as defined at 42 USC § 9601(35)(B). Additionally, an evaluation of business environmental risk associated with a parcel of commercial real estate may necessitate investigation beyond that identified in this practice; therefore, this Phase I ESA may not be a comprehensive evaluation of business risks nor is it an environmental compliance audit.

A Phase I ESA is a service in which basic elements are determined by the standard of care prevailing at the time the service was rendered in the area where it was rendered. Because standards of care can be identified only through retrospective inquiry, Burns & McDonnell has assumed that the standard of care is The American Society for Testing and Materials (ASTM) Standard E1527-05.

The term *Recognized Environmental Condition* as defined by ASTM means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, ground water, or surface water of a property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not *Recognized Environmental Conditions*.

1.2 DETAILED SCOPE-OF-SERVICES

Burns & McDonnell's Authorization No. 42 for Professional Services dated January 7, 2008 contains the detailed scope of services and terms and conditions governing this work. A copy of Burns & McDonnell's Authorization No. 42 is provided in Appendix C.

1.3 SIGNIFICANT ASSUMPTIONS

Burns & McDonnell obtained environmental database information from Environmental Data Resources, Inc. (EDR), a commercial provider of that service. Burns & McDonnell provided EDR with the addresses of the Property to use as the center of its search radius. EDR cites distances on their radius maps and reports from the property addresses. Thus, the search distances in the EDR reports approximate the search radius as specified by ASTM.

Burns & McDonnell requested historical aerial photographs, historical topographic maps, city directories, and Fire Insurance Maps (Sanborn® Maps) from EDR. Burns & McDonnell provided EDR with the addresses of the Property and asked them to use it as the center of their search criteria. NPPC should be aware that other historical aerial photographs, historical topographic maps, city directories, and Sanborn® Maps may exist that Burns & McDonnell was not able to obtain and did not review.

Burns & McDonnell assumes that hidden, unapparent, or latent conditions or defects are not in or on the Property, subsoil, or structures other than those noted in this report. Burns & McDonnell assumes no responsibility for such conditions or inspection, engineering, or repair, which might be required to discover or correct such conditions.

The following significant assumptions were made to formulate the recommendations and opinions contained in this report:

- Groundwater flow follows the surface topography;
- Existing reports are accurate;
- Interview comments are accurate;
- Environmental database information is complete;
- Conditions at the time of the site visit were representative of ordinary conditions at the Property;
- Location of Property boundaries are accurate; and
- Geologic and groundwater conditions are the same as shown on published maps.

The key site manager is defined by the ASTM Standard as a person identified by the owner as having a good knowledge of the uses and physical characteristics of the Property. The Property owner representative, Ms. Joyti Raval, meets the definition of the key site manager for the Property.

1.4 LIMITATIONS OF THIS PHASE I ESA

This report is an instrument of service prepared by Burns & McDonnell for the exclusive use of NPPC. Unless agreed to in writing by Burns & McDonnell, no party other than NPPC is permitted by Burns & McDonnell to rely on this instrument of Burns & McDonnell's service.

This Phase I ESA was conducted in accordance with the principles established in ASTM Standard E1527-05 and as such, findings, conclusions, and opinions given in this report are based upon information derived from the most recent Site reconnaissance and from other activities described herein. The most recent Site reconnaissance of the Property was performed on January 22, 2008.

The ASTM Standard lists the following items as considerations beyond scope – that is, environmental conditions that are beyond the scope of the environmental site assessment:

- Asbestos Containing Materials
- Radon
- Lead in Drinking Water
- Wetlands
- Regulatory Compliance
- Cultural and Historic Resources
- Industrial Hygiene
- Health and Safety
- Ecological Resources
- Endangered Species
- Indoor Air Quality
- High Voltage Power Lines
- Controlled Substances

No non-scope considerations were included in this assessment.

A summary of limiting conditions experienced during the Site reconnaissance is listed in Section 5.1 of this report.

This Phase I ESA as conducted under the ASTM 1527-05 and the AAI Standard is presumed to be valid if completed within 180 days prior to the date of Property acquisition. Thereafter, this Phase I ESA is invalid, unless updated as part of a subsequent service by Burns & McDonnell.

1.5 SPECIAL TERMS AND CONDITIONS

This Phase I ESA was performed pursuant to ASTM E1527-05. NPPC furnished the following information:

- NPPC provided Burns & McDonnell with the location of the Property to be assessed.
- NPPC identified Ms. Joyti Raval as the owner representative for the Property.

NPPC is the prospective buyer. NPPC has requested that a Phase I ESA be performed to satisfy one of the requirements to qualify for the landowner liability limitations on CERCLA liability.

* * * * *

2.0 SITE DESCRIPTION

2.1 LOCATION AND LEGAL DESCRIPTION

This Phase I ESA was conducted of Property located at 2422 5th Avenue South, Ft. Dodge, Iowa as shown on the 1979 Fort Dodge, Iowa USGS topographic maps (Appendix A). NPPC provided Burns & McDonnell with the location of the Property. A copy of the Property parcel map, obtained from the Webster County GIS website, is included in Appendix A.

2.2 SITE AND VICINITY CHARACTERISTICS

The Property consists of approximately 0.95 acres. The Property is accessed by 5th Avenue from the south and by an alley from the east off 25th Street. The surrounding properties are used for commercial and industrial purposes.

2.3 CURRENT USE OF THE PROPERTY

The Property is used as the Sunshine Laundry, which offers self-service and drop-off laundry services, a small deli and tanning bed services. According to the Property owner, the Property has been utilized as a Laundromat since approximately 1984. According to the Ft. Dodge Department of Business Affairs and Commercial Growth, the Property is zoned "HI-Heavy Industrial". Burns & McDonnell found no records or information to contradict the current use of the Property. Photographs of the Property taken during the Site visit are provided in Appendix D.

2.4 DESCRIPTION OF STRUCTURES, ROADS, and IMPROVEMENTS

The primary Property access is from 5th Avenue on the south side. The Property can also be accessed via an alley from the east side off South 25th Street. There are two structures on the Property: an approximately 3,768 square foot building used as Laundromat and an approximately 100 square foot building used as a storage shed. The main structure is located in the southeast corner of the parcel and the small shed is located on the north side of the main structure, toward the east side. The structures are of concrete block construction on a concrete slab. The main structure includes washers and dryers as part of the laundromat services, a small deli counter, a small office space, a small room with a tanning bed, and a room that housed the backs of some of the larger washers and dryers and a hot water tank. According to the Property owner, the small shed is used for storage of small items including a lawn mower and out-of-use food service equipment. The remainder of the parcel is used as a parking area. At the time of the Site visit, the Property was covered with a significant, recent snowfall and the ground surface could be not observed.

2.5 CURRENT USES OF THE ADJOINING PROPERTIES

"Adjoining properties," as defined herein, are areas with boundaries in common with the Property, or separated from the Property only by a public right-of-way. Adjoining land to the east is a Wells Fargo bank. Adjoining land to the north is occupied by a strip mall type shopping area that includes the following businesses (from south to north): CitiFinancial, Flowers by Vernon, Faithworks Books, Bridgewood Lanes (bowling), Stiles Trophies, Osweilers Fashions, and Foley Formalwear. Adjoining land to the west is occupied by NPPC's Ft. Dodge Plant. Adjoining land to the south is 5th Avenue. Across 5th Avenue (from east to west) is the Tuscany Day Spa and Beauty School, a hair salon and an auto finishes store. Photographs of adjoining properties are provided in Appendix D.

* * * * *

3.0 OWNER AND CLIENT PROVIDED INFORMATION

3.1 TITLE RECORDS

A chain-of-title report was obtained from Banks Information Solutions, Inc. (Banks) for the Property. According to the report, Sunshine Company, LC is the current title holder of the Property. Sunshine Company, LC purchased the Property in 1994. Copies of the report is included in Appendix A.

There were no environmental liens or activity and use limitations identified in the Banks chain-of-title reports.

3.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

Burns & McDonnell asked Ms. Raval, Property owner representative, if there were:

- any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the Property;
- any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the Property;
- any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products, and
- any limitations on activity or Property use.

Ms. Raval indicated that she is not aware of any pending, threatened, or past proceedings or limitations of any kind.

3.3 SPECIALIZED KNOWLEDGE

Burns & McDonnell asked Ms. Raval if she has any specialized knowledge or experience that may be material to *Recognized Environmental Conditions* in connection with the Property. Ms. Raval indicated that she has no such knowledge.

3.4 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

Burns & McDonnell asked Ms. Raval if she has actual knowledge that the purchase price of the Property is significantly less than the purchase price of comparable properties. Ms. Raval indicated that she is not aware of any such valuation reduction of the Property for environmental reasons.

3.5 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

The following information is available concerning the Property:

Owner of Record:	Sunshine Company, LC
Occupant Names:	Sunshine Laundry
Key Site Manager:	Ms. Joyti Raval, Property owner representative

* * * * *

4.0 RECORDS REVIEW

Burns & McDonnell Engineering Company Inc. (Burns & McDonnell) obtained and reviewed environmental and physical setting records and historic information in an effort to identify *Recognized Environmental Conditions* in connection with the Property. The following subsections are a narrative description of the records Burns & McDonnell obtained and reviewed.

4.1 PHYSICAL SETTING SOURCES

The ASTM standard source for physical setting information is the USGS 7.5 minute topographical map. The 1979 Fort Dodge North, Iowa USGS topographic map illustrating the Property location is included in Appendix A. Adjacent property use is commercial and industrial.

4.2 STANDARD ENVIRONMENTAL RECORD SOURCES, FEDERAL AND STATE

EDR provided an ASTM Radius Report containing United States Environmental Protection Agency (EPA), State and Tribal database information in accordance with ASTM search distances. Appendix B contains EDR's Radius Report (The EDR Radius Map with Geocheck®) that lists the federal, state and tribal databases searched, a description of the databases, and the most recent release date of each database. The report also shows EPA and State regulated sites within the search area and other regulated sites that could be in the search area, but were unplotable due to insufficient address or other locator information. These unplotable sites are called "Orphan Sites".

EDR included the following ASTM-required databases in its search of environmental records:

Table 4-1 ASTM-Required Databases Searched	
Database Name	Approximate Minimum Search Distance in Miles
Federal National Priorities List (NPL)	1.0
Federal Delisted NPL Site List	0.5
Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List	0.5
Federal CERCLIS NPL NFRAP Site List	0.5
Federal Resource Conservation and Recovery Act Treatment, Storage, and Disposal Facilities Listed on the Corrective Action Tracking System (RCRA CORRACTS TSD) Facilities List	1.0
RCRA non-CORRACTS TSD Facilities List	0.5

Table 4-1 ASTM-Required Databases Searched	
Database Name	Approximate Minimum Search Distance in Miles
Federal RCRA Generators List	Property and Adjoining
Federal Institutional Control/Engineering Control Registries ¹	Property Only
Federal Emergency Response Notification System (ERNS)	Property Only
State and Tribal Equivalent NPL	1.0
State and Tribal Equivalent CERCLIS List	0.5
State and Tribal Solid Waste Landfills and/or Solid Waste Disposal Site Lists (SWF/LF)	0.5
State and Tribal Leaking Storage Tank Lists (LAST and LUST)	0.5
State and Tribal Registered Storage Tank Lists (AST and UST)	Property and Adjoining
State and Tribal Institutional Control/Engineering Control Registries	Property Only
State and Tribal Voluntary Cleanup Sites	0.5
State and Tribal Brownfield Sites	0.5

EDR identified 44 sites in the 24 ASTM-required databases searched. A copy of the database search report is provided in Appendix B.

The following non-ASTM required databases were also searched:

Table 4-2 Supplemental Databases Searched	
Database Name	Approximate Minimum Search Distance in Miles
Superfund (CERCLA) Consent Decrees (CONSENT)	1.0
NPL Records of Decision (ROD)	1.0
National Priority List Proposed (Proposed NPL)	1.0
Facility Index System/Facility Identification Initiative Program Summary Report (FINDS)	0.5
NPL Liens	Property only
Hazardous Materials Information Reporting System (HMIRS)	Property only
Material Licensing Tracking System (MLTS)	Property only
Mines Master Index File (MINES)	0.25
Federal Superfund Recover (NPL Recover)	Property only

Table 4-2
Supplemental Databases Searched

Database Name	Approximate Minimum Search Distance in Miles
PCB Activity Database System (PADS)	Property only
Formerly Used Defense Sites (FUDS)	1.0
Indian Reservations (INDIAN RESERV)	1.0
Department of Defense Sites (DOD)	1.0
Uranium Mill Tailings Sites (UMTRA)	0.5
DOT OPS	Property only
Open Dump Inventory (ODI)	0.5
RCRA Administrative Action Tracking System (RAATS)	Property only
Toxic Chemical Release Inventory System (TRIS)	0.5
Toxic Substances Control Act (TSCA)	Property only
Section 7 Tracking System (SSTS)	Property only
FIFRA/TSCA Tracking System (FTTS)	Property only
A Listing of Brownfields Sites (US BROWNFIELDS)	0.5
LUCIS	0.5
Integrated Compliance Information System (ICIS)	Property only
Debris Region 9	0.5
HIST FTTS	Property only
RADINFO	Property only
Iowa Spills Database (CO ERNS)	Property only
ALLSITES	0.5
State Liens	Property only
State Drycleaner Facilities (DRYCLEANERS)	0.25
Meth Lab Locations (CDL)	Property only
NPDES	Property only
EDR Proprietary Manufactured Gas Plant Sites (MGP)	1.0
AIRS	Property only

One site was identified by EDR in the 35 ASTM supplemental databases searched. A copy of the EDR database search report is provided in Appendix B.

EDR identified 27 listings (Orphan Sites) in the 59 databases searched as having insufficient street information to locate them with respect to the Property. None of the 27 Orphan Sites were determined to be within or potentially within the ASTM defined radii of the Property.

4.2.1 Federal National Priorities List (NPL) – [Date of Gov't Ver.: 07/18/2007]

The National Priority List (NPL) is published semi-annually by the EPA. The NPL list is also known as the Superfund sites list. There is no NPL sites listed on or within a 1.0 mile radius of the Property.

4.2.2 Federal Delisted NPL Site List – [Date of Gov't Ver.: 08/27/2007]

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the USEPA uses to delete sites from the NPL. In accordance with 40 C.F.R. 300.425(e), sites may be deleted from the NPL where no further response is appropriate.

4.2.3 Federal Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) – [Date of Gov't Ver.: 04/23/2007]

The CERCLIS contains data on potentially hazardous waste sites that have been reported to the EPA by states, municipalities, private companies, and private persons, pursuant to Section 103 of the CERCLA. CERCLIS contains sites that are either proposed to be or are on the NPL and sites which are in the screening and assessment phase for possible inclusion on the NPL. There are no CERCLIS sites reported by EDR as being within 0.5 miles of the Property.

4.2.4 CERCLIS NFRAP – [Date of Gov't Ver.: 06/21/2007]

CERCLIS NFRAP sites are sites that have been reclassified as No Further Remedial Action Planned (NFRAP) by EPA. This action was taken by the EPA beginning February 1995 as a part of the Brownfields Redevelopment Program. These former CERCLIS sites have been delisted because a lack of significant contamination was found. The MidAmerican Energy Co-Ft Dodge site is located at 637 S 22nd Street, approximately 1/8 to 1/4-mile southwest of the Property. The site went through the Discovery process in 1980. In 1985, a preliminary assessment was conducted and the No Further Remedial Action Planned Status was issued and the site was archived. This site is not believed to have impacted the Property. See the EDR database search report in Appendix B for additional information on this property.

4.2.5 RCRIS Corrective Action Report (CORRACTS) – [Date of Gov't Ver.: 6/26/2007]

The CORRACTS list identifies hazardous waste handlers with RCRA corrective action activity. There were no CORRACTS sites reported by EDR as being within 1.0 miles of the Property.

4.2.6 Federal Resource Conservation and Recovery Information System Sites (RCRIS)

The Resource Conservation and Recovery Information System (RCRIS) includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA).

4.2.6.1 Treatment, Storage, and Disposal Facilities (RCRIS TSDF) – [Date of Gov't Ver.: 06/13/2006]

RCRIS TSDF list includes selective information on hazardous waste treatment, storage, and disposal facilities at which no corrective action activity has occurred. There were no TSD facilities identified on or within 0.5 miles of the Property.

4.2.6.2 Hazardous Waste Large Quantity Generators (RCRIS LQG) – [Date of Gov't Ver.: 06/13/2006]

The RCRIS LQG list provides information on facilities reporting that they generate enough hazardous waste to be classified as large quantity generators pursuant to RCRA. There were no RCRIS LQG sites identified on or within 0.25 miles of the Property.

4.2.6.3 Hazardous Waste Small Quantity Generators (RCRIS SQG) – [Date of Gov't Ver.: 06/13/2006]

The RCRIS SQG list provides information on facilities reporting that they generate hazardous waste in quantities low enough to be classified as small quantity generators pursuant to RCRA. This list may include facilities that were one-time generators of hazardous wastes. There was one facility identified in the RCRIS SQG database within 0.25 miles of the Property. The Graham Tire Co. is located at 110 S. 25th Street, approximately 1/8 to 1/4-mile north northeast of the Property. There were no violations identified for this facility and it is not believed to have impacted the Property.

4.2.6.4 Hazardous Waste Conditionally Exempt Small Quantity Generators (RCRIS CESQG) – [Date of Gov't Ver.: 06/13/2006]

The RCRIS CESQG list provides information on facilities reporting that they generate hazardous waste in quantities low enough to be classified as small quantity generators pursuant to RCRA. This list may also include facilities that were one-time generators of hazardous wastes. There were five facilities identified in the RCRIS CESQG database within 0.25 miles of the Property.

Table 4-3 Summary of the RCRIS CESQG List			
Facility Name	Estimated Distance and Direction in Miles	Topographic Position Relative to Property	Status
Nestle Purina Petcare Co	0-0.125, SSE	Equal/Higher	No violations found
Automotive Finishes	0-0.125, SE	Equal/Higher	No violations found
Sears Roebuck & Co	0.125-0.25, NE	Lower	No violations found
Fort Dodge Ford Lincoln Mercury	0.125-0.25, E	Lower	No violations found
MidAmerican Energy Co-Ft. Dodge	0.125-0.25, SW	Lower	Two violations were issued and brought into compliance in 1994.

These sites are not anticipated as being a significant risk to the Property.

4.2.6.5 Hazardous Waste Non-Generators (RCRIS Non-Gen) – [Date of Gov't Ver.: 06/13/2006]

The RCRIS Non-Generators list provides information on facilities that previously reported that they generate hazardous waste, but no longer generate hazardous waste. This list may also include facilities that were one-time generators of hazardous wastes. There were five facilities identified in the RCRIS Non-Generators database within 0.25 miles of the Property.

Table 4-4 Summary of the RCRIS Non-Generators List			
Facility Name	Estimated Distance and Direction in Miles	Topographic Position Relative to Property	Status
Electronic Engineering Co.	0-0.125, SE	Equal/Higher	No violations found
Payless Cashways Inc. #81-Forme	0-0.125, ESE	Equal/Higher	No violations found
Sunshine Laundry	Property	-----	No violations found
Crown Motors	0.125-0.25, W	Lower	No violations found
Walgreen's #0409	0.125-0.25, ENE	Lower	No violations found

According to the EDR database, the Property became a non-generator in October of 1994. The types of wastes indicated for the Property are D001 and F002 wastes. There is no additional information included

in the EDR report. A Freedom of Information Act request for the facility was submitted to the EPA Region VII offices. Documents related to the RCRA generator status of the Property were provided by Region VII and are discussed in Section 4.3.10 of this report.

The off-site facilities are not anticipated to be a significant risk to the Property.

4.2.7 Federal Emergency Response Notification System (ERNS) – [Date of Gov't Ver.: 12/31/2006]

ERNS is a national database published by the National Response Center and the United States Coast Guard. The database lists information about sites where reported releases of oil and hazardous substances have occurred. There were no ERNS incidents identified on or within 0.25 miles of the Property.

4.2.8 State Equivalent of the CERCLIS List (SHWS) – [Date of Gov't Ver.: 08/15/2007]

The State Hazardous Waste Sites (SHWS) records are the states' equivalent to CERCLIS. These records show sites of suspected contamination slated for cleanup by the State of Iowa and sites where cleanup will be paid for by potentially responsible parties. The EDR database search report indicated there were no SHWS sites listed within 1.0 miles of the Property.

4.2.9 ALLSITES List – [Date of Gov't Ver.: 08/16/2007]

The ALLSITES list includes all sites that are included in the contaminated sites tracking database. The database includes several regulatory compliance programs and actions. The EDR database search report indicated there is one ALLSITES sites listed within 0.5 miles of the Property. The Ferguson Trust site is located at 2503-2507 5th Avenue South, which is 0 to 0.125-miles east southeast of the Property.

According to the EDR report this is an AST site with a closed status. Additional documents relating to the Ferguson Trust site were obtained from the Iowa Department of Natural Resources (IDNR). These documents are summarized in the following paragraphs.

A Phase I ESA conducted by Environmental Resource Services (ERS), dated August 1998, was reviewed. Part of this document is included in Appendix I. The Phase I ESA indicates that a filling station was present on the Ferguson Trust land from as early as 1941 (based on land ownership records reviewed by ERS) until approximately 1965. ERS indicates that there were four, aboveground storage tanks associated with the filling station. A Sanborn Fire Insurance map from 1965 is included in the ERS Phase I ESA and shows the site at the southeast corner of the intersection of 5th Ave. South and 25th Street S., with the ASTs visible. [The Property is undeveloped in this Sanborn Map]. At the time the Phase I ESA

was conducted by ERS, the site included a building and was used as a commercial site. The past use of the site as a filling station was identified as a *Recognized Environmental Condition*.

Based on the results of the Phase I ESA conducted by ERS, a Phase II investigation was performed at the site by MER Engineering, Inc. Analytical laboratory results indicate volatile organic compounds exceeding the IDNR action levels as established by Chapter 133 of the IAC on this site. An excerpt from the Phase II report and the associated boring logs are included in Appendix I.

An IDNR Site Investigation Report Review - Initial Site Screening Report dated February 10, 1999 was also reviewed and reported the following: "Groundwater samples were collected for the analyses of the benzene, toluene, ethylbenzene, and xylene (BTEX) compounds from all ten boring locations and for total extractable hydrocarbons (TEH) (as diesel, gasoline, and motor oil) from five boring locations. The highest levels for the BTEX compounds were 1,300 ug/L for benzene, 1,100 ug/L for toluene, 1,400 ug/L for ethylbenzene, and 4,100 ug/L for xylenes. Most of the borings locations showed benzene contamination above 5 ug/L, which is the drinking water standard action level. The highest levels for TEH were 63,000 ug/L as diesel and 270,000 ug/L as gasoline. [...] In comparison to the Chapter 135 regulations, the highest benzene level of 1,300 ug/L exceeds the Tier 1 Look-Up Table values for most of the exposure pathways. Groundwater ingestion, actual (5 ug/L) and potential (290 ug/L); Groundwater to Plastic Water Line (290 ug/L); Surface Water (290 ug/L). The highest level of TEH as diesel of 63,000 ug/L also exceeds the Tier 1 Look-Up Table value for the actual groundwater ingestion pathway (1,200 ug/L). The BTEX levels found in soil samples are well below the new statewide soil standards by the incidental ingestion pathway. However, the highest benzene level of 1.2 ppm exceeds the Tier 1 Look-Up Table values for the Soil Leaching to Groundwater pathway (0.54 ppm) and the Soil Vapor to Enclosed Space pathway (1.16 ppm)." The site was given a "Priority 2 designation" and groundwater monitoring was conducted.

As indicated in a March 6, 2000 letter from IDNR to the then current owner of the site, New Millennium Development, permanent groundwater monitoring wells were installed in 2000 at the concurrence of IDNR.

A groundwater monitoring report was submitted to IDNR in December 2000. This report includes a site map indicating that groundwater flow direction at the site is to the northwest, toward the Property.

The site was issued a No Further Action in a letter dated January 21, 2001 because benzene levels “have appeared to level out or remain consistent with the previous reports.” No further monitoring or testing was required by the IDNR.

Though the site was issued a No Further Action status by the IDNR, groundwater contamination is still present at the site. The groundwater flow direction reported at the site in the December 2000 groundwater monitoring report is to the northwest, thus making the Property potentially downgradient from this site. For these reasons, this site is considered a *Recognized Environmental Condition*.

4.2.10 State Solid Waste Sites (SWF/LF) – [Date of Gov't Ver.: 08/28/2007]

This database lists sites that are regulated by the State of Iowa as solid waste disposal facilities or landfills. These may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D 4004 criteria. There are no SWF/LF sites located within 0.5 miles of the Property.

4.2.11 State Leaking Storage Tank Lists

4.2.11.1 Leaking Underground Storage Tank Report (LUST) – [Date of Gov't Ver.: 10/02/2007]

The IDNR LUST records provide an inventory of reported leaking underground storage tank incidents. The list is updated semi-annually. The following table provides a summary of the 18 LUST sites reported by EDR as being within 0.5 miles of the Property.

Table 4-5 Summary of the LUST List			
Facility Name	Estimated Distance and Direction	Topographic Position Relative to Property	Status
Friskie's Pet Care	0-0.125, SSE	Equal/Higher	Excavation – NFA issued 1990
Payless Cashways Inc. #81-Forme	0-0.125, ESE	Equal/Higher	Excavation – NFA issued 1988
Westwood Ford	0.25-0.5, NNE	Equal/Higher	Unknown action – Low Risk
Kum & Go	0.25-0.5, NNW	Equal/Higher	Unknown action – NFA issued 2002
Ron's Car Wash	0-0.125, NE	Lower	Unknown action – NFA issued 2002

Table 4-5 Summary of the LUST List			
Facility Name	Estimated Distance and Direction	Topographic Position Relative to Property	Status
Coastal Mart #1031	0.125-0.25, W	Lower	Unknown action – NFA issued 2002
MidAmerican Energy Co-Ft Dodge	0.125-0.25, SW	Lower	Unknown action – NFA issued 2001
Mid-Continent Lumber Dealers S	0.125-0.25, SW	Lower	Unknown action – NFA issued 2006
Yellow Freight	0.25-0.5, WNW	Lower	Excavation – NFA issued 1991
Kum & Go #88	0.25-0.5, NNE	Lower	Unknown action – NFA issued 1999
Ron's Car Wash, Inc.	0.125-0.25, NNE	Lower	Unknown action – NFA issued 1999
Conoco Fastway	0.25-0.5, W	Lower	Unknown action – NFA issued 2001
Former Sign Company	0.25-0.5, NW	Lower	Unknown action – NFA issued 2001
Former Holiday Store	0.25-0.5, W	Lower	Unknown action - High Risk; reported in 2001
Nolting Oil	0.25-0.5, W	Lower	Unknown action – NFA issued 2001
Hwy 20 66 Service Station	0.25-0.5, W	Lower	Unknown action – NFA issued 1999
National Warehouse	0.25-0.5, NNW	Lower	Unknown action – NFA issued 1994
Doc's Stop #1	0.25-0.5, W	Lower	Unknown action - High Risk; reported in 1992

None of the open sites listed in Table 4-8 are located adjacent to the Property. Two of the open LUST sites are located west of the Property and one of the open LUST sites is located north northeast of the Property. Details regarding the cleanup and/or monitoring status of these sites is not included in the EDR database. Based on the topographic map, groundwater in the vicinity of the Property is believed to flow to the west. Two of the three open sites are to the west of the Property, which is downgradient from the

Property. Therefore, it is not expected that these sites have impacted the Property. One of the three open sites is to the north northeast of the Property, which is upgradient from the Property. However, due to the distance between the site and Property and the low risk classification of the site, it is not expected that this site has impacted the Property. See the EDR database search report in Appendix B for additional information on these properties.

4.2.11.2 Leaking Aboveground Storage Tank Report (LAST) – [Date of Gov't Ver.: 05/03/2007]

The IDNR maintains a registry of leaking aboveground storage tanks. There were not LAST sites reported within approximately 0.5-miles of the Property.

4.2.12 State and Tribal Registered Storage Tank Lists

4.2.12.1 Underground Storage Tank Report (UST) – [Date of Gov't Ver.: 10/02/2007]

The IDNR UST records provide an inventory of registered underground storage tanks. The following table provides a summary of the twelve UST sites reported by EDR as being within 0.25 mile of the Property.

Table 4-6 Summary of the UST List			
Facility Name	Estimated Distance and Direction	Topographic Position Relative to Property	Status
Friskie's Pet Care	0-0.125, SSE	Equal/Higher	Two tanks - removed
Payless Cashways Inc. #81-Forme	0-0.125, ESE	Equal/Higher	One tank - removed
Air Products & Chemicals Inc.	0.125-0.25, E	Lower	One tank – removed
Ron's Car Wash	0-0.125, NE	Lower	One tank – removed
Sears	0.125-0.25, NE	Lower	One tank – removed
Coastal Mart #1031	0.125-0.25, W	Lower	Four tanks – removed
Automated Ready Mix	0.125-0.25, SSE	Lower	Four tanks – removed
MidAmerican Energy Co-Ft Dodge	0.125-0.25, SW	Lower	Three tanks - removed
Goodyear ASC	0.125-0.25, NNE	Lower	Eight tanks – active: non-regulated hoist oil tanks installed 2000, each identified as 1-gallon capacity
Wood Plaza	0.125-0.25, E	Lower	Three tanks – removed

Table 4-6 Summary of the UST List			
Facility Name	Estimated Distance and Direction	Topographic Position Relative to Property	Status
Ft. Dodge Rent All	0.125-0.25, W	Lower	Five tanks - removed
Mid-Continent Lumber Dealers S	0.125-0.25, SW	Lower	One tank - removed

None of these UST sites are on land adjoining the Property, with the exception of the Friskie's site that is adjacent to the west. The presence of USTs at these facilities is not believed to have impacted the Property. See the EDR database search report in Appendix B for more information on these properties.

4.2.12.2 Aboveground Storage Tank Report (AST) - [Date of Gov't Ver.: 10/02/2007]

The IDNR AST records provide an inventory of registered aboveground storage tanks. The following table provides a summary of the AST sites reported by EDR as being within 0.25 miles of the Property.

Table 4-7 Summary of the AST List			
Facility Name	Estimated Distance and Direction	Topographic Position Relative to Property	Status
Not reported 2516 7 th Ave. South	0.125-0.25, ESE	Lower	12,000-gallon tank
Not reported 637 South 22 nd St	0.125-0.25, SW	Lower	2,000-gallon tank

Because these tanks are not located on adjacent land and there are no associated leaks reported, these sites are not believed to have impacted the Property. See the EDR database search report in Appendix B for more information on this property.

4.2.13 Federal Institutional Control/Engineering Control Registries – [Date of Gov't Ver.: 08/15/2007]

Sites with institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter

environmental media or effect human health. The Property address was not identified on the Federal Institutional Control/Engineering Control Registries.

4.2.14 State Voluntary Cleanup Program (VCP) - [Date of Gov't Ver.: 03/29/2007]

The state Voluntary Cleanup Program (VCP) database includes sites in Iowa that are in the VCP program which establishes a voluntary, risk-based system of remediation based on protection of human health and the environment relative to current and future uses of a particular site. There were no VCP sites identified within 0.5 miles of the Property.

4.3 HISTORICAL USE INFORMATION ON THE PROPERTY AND ADJOINING PROPERTIES

Burns & McDonnell reviewed reasonably ascertainable and practically reviewable historical information concerning the Property and adjoining properties. The historical information Burns & McDonnell reviewed included:

- Historical Aerial Photographs
- Historic Topographic Maps
- Sanborn Fire Insurance Maps
- Local Street Directories
- Zoning/Land Use Records
- Flood Insurance Rate Maps
- Interviews

4.3.1 Summary of Past Uses of the Property

Burns & McDonnell obtained information from the Site visit on January 22, 2008, conducted interviews, and reviewed records in an attempt to identify the uses of the Property back to 1940 or the first developed use of the Property, whichever is earlier, as required by the ASTM Standard.

According to the building permit records, the structure on the Property was built in 1974. Based on a review of aerial photographs available, the Property was used for agricultural purposes prior to that time as early as 1939.

4.3.2 Aerial Photographs

Burns & McDonnell reviewed historical aerial photographs from EDR (1978, 1984 and 1995), from the Webster County United States Department of Agriculture office (1939, 1958, and 1990) and the city of Ft. Dodge (1967 and 1974). Burns & McDonnell reviewed these aerial photographs to obtain information about the history of development on and in the vicinity of the Property. The following paragraphs provide a summary of Burns & McDonnell's review of the historic aerial photographs for the Property; however, due to the small size of the Property, details are difficult to see with certainty on the aerial photographs.

1939	The Property appears to be used for the cultivation of row crops. Adjacent land is also used for agricultural purposes.
1958	The Property appears unchanged from the 1939 photograph. The facility to the west that is now the adjacent NPPC facility is visible. Several structures are visible on the south side of 5 th Avenue. Land to the north and east appear to be used for agricultural purposes. A structure is present on land to the northeast of the Property.
1967	The Property appears undeveloped. Land to the east and south appears unchanged from the 1958 aerial photograph. Structures are now present on land to the north.
1974	The current structure is present on the Property. Land to the north, south and west appears unchanged. The structure now present to the east is visible.
1978	The Property and surrounding land appears unchanged from the 1974 aerial photograph.
1984	Due to the poor quality of the photograph, details are not visible on this aerial photograph.
1990	The Property and surrounding land appears unchanged from the 1978 aerial photograph.
1995	The Property and surrounding land appears unchanged from the 1990 aerial photograph.

Copies of the aerial photographs are included in Appendix E.

4.3.3 Historic Topographic Maps

Burns & McDonnell reviewed historic topographic maps obtained from EDR for the year 1979. Additional topographic maps were provided for adjoining land from 1923 and 1965; however, the

Property is not shown on these maps. The following paragraphs provide a summary of Burns & McDonnell's review of the historic topographic maps for the Property.

1979	The area of the Property is shaded to indicate dense development; individual structures are not indicated on the map.
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A copy of The EDR-Historical Topographic Map Report is included in Appendix F.

4.3.4 Local Street Directories

Burns & McDonnell requested The EDR-City Directory *Abstract* report for the Property and surrounding properties from EDR. Business directories including city, cross reference, and telephone directories were reviewed, if available. The following table summarizes the results of the report (all abbreviations and spellings are as indicated in the original source document).

1961	Address not listed
1966	Address not listed
1971	Address not listed
1976	Sambo's Restaurant
1981	Sambo's Restaurant
1986	Rainbow Laundry & Dry Cleaning
1991	Rainbow Laundry & Dry Cleaning
1996	Sunshine Laundromat
2001	Sunshine Laundromat Deli & Tan
2006	Sunshine Laundromat Deli & Tan

A copy of The EDR-City Directory Abstract Report is included in Appendix G.

4.3.5 Fire Insurance Maps (Sanborn Maps)

Burns & McDonnell requested Fire Insurance Maps from EDR (Sanborn® Map Report) for the Property and surrounding properties. EDR indicated that Sanborn Fire Insurance maps do not exist for the Property. A copy of the EDR Sanborn® Map – No Coverage Report is included in Appendix H.

4.3.6 Property Tax Records

Burns & McDonnell did not review property tax records for the Property because ownership information was available from the chain-of-title reports.

4.3.7 Zoning/Land Use Records

Burns & McDonnell reviewed information on file at the Ft. Dodge Department of Business Affairs and Commercial Growth in an effort to identify the land use and zoning classification of the Property. Refer to Section 2.3 for a discussion of the Property zoning.

4.3.8 Fire Department Records

A file search request was submitted to the Ft. Dodge Fire Department regarding emergency responses and underground storage tanks that might be present on the Property. A copy of the request is included in Appendix I. Chief John Webster responded to the request for information by telephone on February 8, 2008. Chief Webster indicated that he was not aware of any calls to the Property for incidents involving hazardous materials or spills of any kind. He indicated that no USTs were located on the Property based on fire department records. He added that a few calls have been made to the Property over the years for small fires related to lint. Chief Webster has been with the department for 36 years.

4.3.9 Existing Technical/Environmental Reports

Burns & McDonnell asked Ms. Raval if she knew of any existing technical/environmental reports regarding the Property. Ms. Raval indicated that she was not aware of any existing technical/environmental reports for the Property and stated that a Phase I ESA had not previously been done for the Property.

4.3.10 Freedom of Information Act Request (FOIA)

Burns & McDonnell submitted general Freedom of Information Act (FOIA) requests to the United States Environmental Protection Agency (EPA) Region VII and the Iowa Department of Natural Resources (IDNR) in order to obtain copies of records for the Property. Ms. Jessica Ackerman, Open Records Coordinator for IDNR, indicated that it has no LUST/UST records for the Property. Ms. Ackerman, also indicated that IDNR has never held complete RCRA records for sites and that the EPA should be contacted for these documents. Copies of the FOIA requests and their responses made to the agencies are provided in Appendix I.

The Region VII EPA office provided documents related to the Property's RCRA history, including an investigation report. A copy of the EPA Notification of Hazardous Waste Activity form dated September 1986 was provided. The name of the Site at that time was Rainbow Cleaners, which was also indicated in the EDR City Directory Search. The owner of the site is indicated as Eugene Hiskey. Mr. Hiskey was also identified as a former owner on the Banks Chain-of-Title report. The form indicates F002 wastes will be generated at the Site.

A complaint record dated January 1992 was also provided. The complaint indicates that an anonymous caller was concerned regarding past waste disposal practices of sludge and filters from three Des Moines cleaners operated by Eugene Hiskey. An e-mail accompanying this form mentions the Ft. Dodge location.

A copy of a RCRA Complaint Investigation dated June 12, 1992 is included in the FOIA documents received. The Complaint Investigation indicates that the facility was inspected by the EPA in June of 1992 and discusses dry cleaning operations at the Site and waste disposal practices in conjunction with these operations. The document indicates that the facility had been in operation since June 1984. The site manager interviewed as part of the investigation indicated that dry cleaning operations had been conducted on the Property, but they had ceased approximately 6 months prior to the Complaint Investigation inspection, when the dry cleaning machine was moved to another facility owned by the same owner in Des Moines. When the dry cleaning operations were occurring, waste perchloroethylene (perc) still bottoms and associated filters were collected. From September 1990 until July 1991, these wastes were collected and disposed of using Safety-Kleen's disposal services. Prior to that time, waste perc was held in 5-gallon pails and stored in the shed. The spent filters were placed in the box that new filters were removed from. The owner's son would pick up the materials and transport them to another facility owned by the same owner in Des Moines. The manager of the facility at that time indicated that there was usually two, 5-gallon pails and two boxes of spent filters ready for pick up at the time the owner's son would come by. The manager also indicated that perchloroethylene had leaked from the buckets stored in the shed on some occasions. At the time of the Complaint Investigation inspection, there was no longer any waste perc or associated filters present in the shed; however, a perc odor was noted as being present in the shed. The investigator also noted stains on the floor of the shed and on and in an adjacent trash dumpster, where a perc odor was also noted as being present. The dumpster was empty at the time of the inspection. There were no samples taken as part of the inspection.

The Site received a Letter of Warning from the EPA dated December 1992 in follow-up to the June 1992 Investigation Complaint inspection. This Letter indicates that the EPA believed that improper disposal practices may have been followed at the Site and reminds the owner of the practices they need to follow to be in compliance.

Also included in the EPA documents is a GPS Field Sheet dated March 1995. This form indicates that no reading could be collected because access was denied. The following deviation is noted on the form: *"Jyoti Raval, co-owner, refused access for reading on facility Property. Will attempt to take reading from*

adjacent street at a later time. Ms. Raval expressed concern that she had been inspected once and had indicated at that time that she no longer used "perk", and that EPA is still sending people to her facility despite this. I explained the purpose of the visit was for recordkeeping only but she declined to sign access agreement."

It should be noted that during the completion of this Phase I ESA, Ms. Raval, through her real estate agent, Rick Peters, was asked if dry cleaning operations had been conducted on the Property. Mr. Peters indicated on Ms. Raval's behalf that *"when they bought the site there was no dry cleaning equipment on site. The current owners have not had any dry cleaning operation on site. They send any dry cleaning out to be dealt with. The current owners have not ever been notified of any environmental issues. Joyti does not know if the previous owner had dry cleaning on site or if they also sent it out."*

The past use of perchloroethylene on the Property is considered a *Recognized Environmental Condition*.

4.3.11 Flood Hazard Boundary Maps

Burns & McDonnell attempted to review a copy of the flood insurance rate map (FIRM) for the Property from the Federal Emergency Management Agency (FEMA) on-line. The most recent FIRM for the Property was dated 1976; however, the only map available covered the entire city of Ft. Dodge and no flood zone information was indicated on the map.

4.3.12 Building Permits

The Ft. Dodge Department of Business Affairs and Community Growth was contacted regarding building permits for the Property. The building permit for the current structure is dated November 1973 and indicates that a Sambo's restaurant was constructed. A permit was issued in March 1984 for the demolition of interior walls and installation of an I-beam for roof support. A permit was issued on September 1984 for the installation of a door and roof on existing 10x10 sidewalls. This is believed to be the small shed currently located behind the main structure. The most recent permit was issued in October 2000 for a new roof. Copies of the building permits are included in Appendix J.

* * * * *

5.0 SITE RECONNAISSANCE

5.1 METHODOLOGY AND LIMITING CONDITIONS

Burns & McDonnell performed reconnaissance of Property located at 2422 5th Avenue, Ft. Dodge, Iowa and publicly visible portions of adjoining properties to obtain information needed to identify any *Recognized Environmental Conditions* associated with the Property. Ms. Sarah Sizemore performed the Site reconnaissance of the Property for Burns & McDonnell on January 22, 2008. Mr. Joe Bonnycastle, from the nearby NPPC manufacturing facility, Mr. Rick Peters, real estate agent for the Property owner, and Ms. Joyti Raval, Property owner, accompanied Ms. Sizemore during the Site reconnaissance. Photographs taken during the Site visits are included in Appendix D.

The following list identifies limitations that were experienced during the Site reconnaissance:

- At the time of the Site visit, the Property was covered with a significant amount of snowfall such that the paved parking area could not be observed directly.
- The interior of the small shed was full of equipment, therefore the floor of the building could not be observed.

5.2 GENERAL PROPERTY SETTING

5.2.1 Current Use of the Property and Adjoining Properties

A description of the current uses, structures, roads, and improvements on the Property is provided in Section 2.3 and 2.4 of this report. A photographic record of the Property and adjoining properties is provided in Appendix D.

5.2.2 Property Topography

According to the 1979 Fort Dodge North, Iowa USGS topographic map, the Property is located at approximately 1,120 feet above mean sea level (MSL) (see Appendix A). The Property appears to be generally flat.

5.2.3 Property Geology

Burns & McDonnell reviewed the United States Department of Agriculture Soil Survey for Webster County, Iowa on-line at <http://websoilsurvey.nrcs.usda.gov/app/>. The Property soil includes four soil units as described in the following table:

Map Unit Name	Approx. % of Property	Description
4000 - Urban Land	92	This is considered a miscellaneous map unit and no description is available. This map unit is often used in heavily developed areas in which the soils have been worked repeatedly due to development.
4507 - Canisteo-Urban Land complex, 0 to 2 % slopes	8	The Canisteo component makes up 50 percent of the map unit. Slopes are 0 to 2 percent. This component is on ground moraines, till plains. The parent material consists of till-derived sediments over supraglacial till. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches is high. Shrink-swell potential is low. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during April. Organic matter content in the surface horizon is about 6 percent. This soil meets hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 18 percent.

5.3 QUESTIONS ABOUT HELPFUL DOCUMENTS

Burns & McDonnell requested from Ms. Raval, Property owner, all available information pertinent to the Phase I Site Assessment including, but not limited to geotechnical reports, environmental reports, records, correspondences, plats of survey, building, grading and development plans, tax number, current legal title holder of the Property, and any other data relevant to the Burns & McDonnell's services. Ms. Raval indicated that she has no such documents in relation to the Property.

5.4 HAZARDOUS SUBSTANCES AND PETROLEUM PRODUCTS IN CONNECTION WITH IDENTIFIED USES

During the Site reconnaissance, Burns & McDonnell looked for indications of the use, treatment, storage, disposal, or generation of hazardous substances or petroleum products on the Property. No such substances or products were observed by Burns & McDonnell on the Property.

5.5 HAZARDOUS SUBSTANCE AND PETROLEUM PRODUCTS CONTAINERS (NOT NECESSARILY IN CONNECTION WITH IDENTIFIED USES)

During the Property reconnaissance, Burns & McDonnell looked for hazardous substance and petroleum products containers on the Property. Burns & McDonnell saw no hazardous substance or petroleum products containers on the Property during the Property reconnaissance that were not necessarily in connection with identified uses.

5.6 UNIDENTIFIED SUBSTANCE CONTAINERS

During the site reconnaissance, Burns & McDonnell looked for unidentified substance containers on the Property. No such substance containers were observed on the Property.

5.7 STORAGE TANKS

5.7.1 Aboveground Storage Tanks (AST)

Burns & McDonnell saw no evidence of ASTs on the Property during the Site reconnaissance. Ms. Raval indicated that she was not aware of any current or historic ASTs on the Property.

5.7.2 Underground Storage Tanks (UST)

Burns & McDonnell saw no evidence of USTs on the Property during the Site reconnaissance. Ms. Raval indicated that she was not aware of any current or historic USTs on the Property.

5.8 ODORS

Burns & McDonnell did not notice any strong or pungent odors on the Property during the Site reconnaissance.

5.9 POOLS OF LIQUID

Burns & McDonnell did not observe any pools of liquid on the Property during the Site reconnaissance, with the exception of those discussed in Section 5.12.1.

5.10 DRUMS

During the Site reconnaissance, Burns & McDonnell looked for the presence of drums on the Property. No drums were observed on the Property.

5.11 PCBs

Burns & McDonnell looked for evidence of electrical or hydraulic equipment known to contain PCBs or likely to contain PCBs during the Site reconnaissance of the Property. Burns & McDonnell saw no evidence of PCB containing equipment during reconnaissance of the Property, with the exception of a transformer located between the main structure and the shed. There were no visible non-PCB stickers on the transformer. The base of the transformer could not be observed for leaks due to the amount of snow on the ground.

5.12 EXTERIOR OBSERVATIONS

5.12.1 Pits, Ponds, or Lagoons

Burns & McDonnell did not observe any pits, ponds, or lagoons on the Property during the Site reconnaissance.

5.12.2 Stained Soil or Pavement

During the Site reconnaissance, Burns & McDonnell looked for stained soil or pavement. At the time of the Site visit, the Property was covered with significant snowfall and the pavement could not be visually observed.

5.12.3 Stressed Vegetation

No areas of stressed vegetation were observed during the Site reconnaissance; however, only a small amount of vegetation is likely present on the Property on the south side of the main structure. At the time of the Site visit, the Property was covered with significant snowfall and the vegetated area could not be visually observed.

5.12.4 Solid Waste

Burns & McDonnell did not observe any unusual mounds or depressions during the site reconnaissance suggesting trash or other solid waste disposal on the Property. At the time of the Site visit, the Property was covered with significant snowfall; however, it did not appear that any solid waste had been disposed of on the Property.

5.12.5 Wastewater

Burns & McDonnell looked for wastewater or other liquid (including storm water) or any discharge into a drain, ditch, or stream on or adjacent to the Property during the Site reconnaissance. Burns & McDonnell did not observe any wastewater discharges from the Property. Storm water would generally pond on the Property or flow to nearby storm drains if accumulated in significant amounts.

5.12.6 Wells

Ms. Raval stated she was not aware of wells of any kind on the Property. Burns & McDonnell did not observe any dry wells, irrigation wells, injection wells, monitoring wells, or potable water wells on the Property during the Site reconnaissance.

According to the well survey conducted by EDR and included in their database search, there is one well within approximately 1/8-mile of the Property.

5.12.7 Septic Systems

Burns & McDonnell did not observe any septic systems or cesspools on the Property during the Site reconnaissance. Ms. Raval indicated that the Property uses the City sanitary sewer system.

5.13 INTERIOR OBSERVATIONS

5.13.1 Heating/Cooling

Burns & McDonnell attempted to identify the means of heating and cooling the buildings on the Property.

Burns & McDonnell also inquired concerning the fuel source for heating and cooling. The building is served by an HVAC system.

5.13.2 Stains or Corrosion

Burns & McDonnell looked for stains or corrosion on floors, walls, or ceilings (except for staining from water) during the reconnaissance of buildings on the Property. Burns & McDonnell observed several stains on the concrete floor in the dryer equipment room. These stains appeared to be from leaking fittings on the dryer equipment. Due to the tight fit of equipment in this room, the entire floor area could not be directly observed.

5.13.3 Drains and Sumps

Burns & McDonnell looked for floor drains and sumps during the reconnaissance of buildings on the Property. Burns & McDonnell observed floor drains scattered throughout the building during the reconnaissance of the Property. Ms. Raval indicated that all floor drains discharge to the city sanitary sewer system.

* * * * *

6.0 INTERVIEWS

Burns & McDonnell interviewed the following persons in order to obtain information indicating *Recognized Environmental Conditions* in connection with the Property:

6.1 INTERVIEW WITH CURRENT PROPERTY OWNER AND KEY SITE MANAGER

On January 22, 2008, Burns & McDonnell interviewed Ms. Joyti Raval, Property Owner representative, regarding the current and historical use of the Property and adjoining properties, institutional controls, specialized knowledge regarding environmental conditions or concerns, owner, property, and occupant information. Information obtained from Ms. Raval is presented in the appropriate sections of this report.

* * * * *

7.0 DATA GAPS

There were no data gaps identified in the preparation of this Phase I ESA, with the exception of the following:

- Burns & McDonnell did not speak with past owner/occupants of the Property or owners of adjacent land.

It is not expected that this data gap has significantly impacted the conclusions of this report.

* * * * *

8.0 DEVIATIONS

There are no deviations from the ASTM 1527-05 standard, with the exception of the following:

- Burns & McDonnell was unable to document first use of Property back to 1940 or its earliest date of development, whichever is earlier. The earliest resource available is a 1939 aerial photograph of the Property, in which the Property appears to be used for agricultural purposes.

* * * * *

9.0 FINDINGS

During the Site reconnaissance and regulatory review of Property located at 2422 5th Avenue, Ft. Dodge, Webster County, Iowa 50501, Burns & McDonnell found the following historical information and known or suspected environmental conditions associated with the Property. These findings may include *Recognized Environmental Conditions*, *Historical Recognized Environmental Conditions*, *Potential Environmental Concerns* and *de minimis* environmental conditions, among other environmental conditions:

- The Property includes approximately 0.95 acres of land. There are two structures on the Property: an approximately 3,768 square foot building used as Laundromat and an approximately 100 square foot building used as a storage shed. The Property was initially developed in 1974 as a Sambo's restaurant. The current owner, Sunshine Company, LC indicated the Property has been used as a Laundromat since approximately 1984.
- The Property is identified as Rainbow Laundry & Dry Cleaning by the City Directory search in 1986 and 1991. Documents provided by the EPA Region VII offices in response to a FOIA request indicate that dry cleaning operations were previously conducted on the Property. These operations are believed to have begun in approximately 1984 and continued until approximately 1992. An EPA Complaint Investigation inspection in June of 1992 found staining in the small shed currently on the Property and in/on an adjacent dumpster. Perchloroethylene was reportedly stored in the shed while awaiting disposal, as well as used filters associated with the drycleaning process. The manager of the facility at the time of the complaint inspection indicated that perchloroethylene had leaked from the buckets stored in the shed on some occasions. The facility received a letter of warning regarding the potential inappropriate handling of these wastes; however, no wastes were actually present on the Property at the time of the inspection.
- Burns & McDonnell observed several stains on the concrete floor in the dryer equipment room. These stains appeared to be from leaking fittings on the dryer equipment. Due to the tight fit of equipment in this room, the entire floor area could not be directly observed.
- The EDR database search report indicated there is one ALLSITES sites listed within 0.5 miles of the Property. The Ferguson Trust site is located at 2503-2507 5th Avenue South, which is 0 to 0.125-miles east southeast of the Property. According to the EDR report, this is an AST site with a closed status. Additional documents relating to the Ferguson Trust site were obtained from the Iowa Department of Natural Resources (IDNR). These documents indicate that a filling station was formerly present on the site and that petroleum soil and

groundwater contamination exist on the site. Groundwater monitoring has been conducted on the site and a No Further Action letter was issued in January 2001.

* * * * *

10.0 OPINIONS

The following is the opinion of the Burns & McDonnell Engineering Company, Inc., Environmental Professional regarding the Findings outlined in Section 9.0.

- The Property is identified as Rainbow Laundry & Dry Cleaning by the City Directory search in 1986 and 1991. Documents provided by the EPA Region VII offices in response to a FOIA request indicate that dry cleaning operations were previously conducted on the Property. These operations are believed to have begun in approximately 1984 and continued until approximately 1992. An EPA Complaint Investigation inspection in June of 1992 found staining in the small shed currently on the Property and in/on an adjacent dumpster. Perchloroethylene was reportedly stored in the shed while awaiting disposal, as well as used filters associated with the drycleaning process. The manager of the facility at the time of the complaint inspection indicated that perchloroethylene had leaked from the buckets stored in the shed on some occasions. The facility received a letter of warning regarding the potential inappropriate handling of these wastes; however, no wastes were actually present on the Property at the time of the inspection. The history of the Property as a dry cleaning facility is considered a *Recognized Environmental Condition*.
- Burns & McDonnell observed several stains on the concrete floor in the dryer equipment room. These stains appeared to be from leaking fittings on the dryer equipment. Due to the tight fit of equipment in this room, the entire floor area could not be directly observed. There is the potential that additional stains are present in this area. The presence of stains in this area is considered a *Potential Environmental Concern*.
- The EDR database search report indicated there is one ALLSITES sites listed within 0.5 miles of the Property. The Ferguson Trust site is located at 2503-2507 5th Avenue South, which is 0 to 0.125-miles east southeast of the Property. According to the EDR report, this is an AST site with a closed status. Additional documents relating to the Ferguson Trust site were obtained from the Iowa Department of Natural Resources (IDNR). These documents indicate that a filling station was formerly present on the site and that petroleum soil and groundwater contamination exist on the site. Groundwater monitoring has been conducted on the site and a No Further Action letter was issued in January 2001. However, benzene groundwater contamination still exists at the site. The groundwater flow direction reported at the site in the December 2000 groundwater monitoring report is to the northwest, thus making

the Property potentially downgradient from this site. For these reasons, this site is considered a *Recognized Environmental Condition*.

10.1 ADDITIONAL INVESTIGATION

Because of the prior use of the Property as a dry cleaning facility, additional investigation is warranted at this time.

* * * * *

11.0 CONCLUSIONS

11.1 RECOGNIZED ENVIRONMENTAL CONDITIONS

This Phase I ESA report has revealed no evidence of *Recognized Environmental Conditions* in connection with the Property, with the exception of the following:

- The Property is identified as Rainbow Laundry & Dry Cleaning by the City Directory search in 1986 and 1991. Documents provided by the EPA Region VII offices in response to a FOIA request indicate that dry cleaning operations were previously conducted on the Property. These operations are believed to have begun in approximately 1984 and continued until approximately 1992. An EPA Complaint Investigation inspection in June of 1992 found staining in the small shed currently on the Property and in/on an adjacent dumpster. Perchloroethylene was reportedly stored in the shed while awaiting disposal, as well as used filters associated with the drycleaning process. The manager of the facility at the time of the complaint inspection indicated that perchloroethylene had leaked from the buckets stored in the shed on some occasions. The facility received a letter of warning regarding the potential inappropriate handling of these wastes; however, no wastes were actually present on the Property at the time of the inspection. The history of the Property as a dry cleaning facility is considered a *Recognized Environmental Condition*.
- The EDR database search report indicated there is one ALLSITES sites listed within 0.5 miles of the Property. The Ferguson Trust site is located at 2503-2507 5th Avenue South, which is 0 to 0.125-miles east southeast of the Property. According to the EDR report, this is an AST site with a closed status. Additional documents relating to the Ferguson Trust site were obtained from the Iowa Department of Natural Resources (IDNR). These documents indicate that a filling station was formerly present on the site and that petroleum soil and groundwater contamination exist on the site. Groundwater monitoring has been conducted on the site and a No Further Action letter was issued in January 2001. However, benzene groundwater contamination still exists at the site. The groundwater flow direction reported at the site in the December 2000 groundwater monitoring report is to the northwest, thus making the Property potentially downgradient from this site. For these reasons, this site is considered a *Recognized Environmental Condition*.

11.2 HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS

This Phase I ESA has revealed no evidence of *Historical Recognized Environmental Conditions* in connection with the Property.

11.3 OTHER POTENTIAL ENVIRONMENTAL CONCERNS

This Phase I ESA has revealed no evidence of *Potential Environmental Concerns* in connection with the Property, with the exception of the following:

- Burns & McDonnell observed several stains on the concrete floor in the dryer equipment room. These stains appeared to be from leaking fittings on the dryer equipment. Due to the tight fit of equipment in this room, the entire floor area could not be directly observed. There is the potential that additional stains are present in this area. The presence of stains in this area is considered a *Potential Environmental Concern*.

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12.0 REFERENCES

Banks Environmental Data, *Environmental Chain of Title*, Sunshine Laundry, 2422 5th Ave. S, Ft. Dodge, IA, 50501, Webster County, Project #: ES30141, January 29, 2008.

EDR Radius Map with GeoCheck, *Sunshine Laundry, 2422 5th Avenue, Ft. Dodge, Iowa 50501*, Inquiry Number 2122591.2s, January 21, 2008.

EDR Historical Topographic Map Report, *Sunshine Laundry, 2422 5th Avenue, Ft. Dodge, Iowa 50501*, Inquiry Number 2122591.4, January 18, 2008.

EDR Sanborn Fire Insurance Map Package, *Sunshine Laundry, 2422 5th Avenue, Ft. Dodge, Iowa 50501*, Inquiry Number 2122591.3, January 17, 2008.

EDR City Directory Abstract, *Sunshine Laundry, 2422 5th Avenue, Ft. Dodge, Iowa 50501*, Inquiry Number 2122591.6, January 22, 2008.

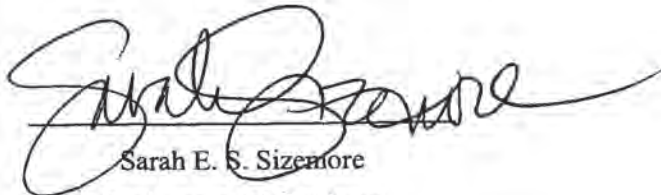
EDR Decade Aerial Photograph Package, *Sunshine Laundry, 2422 5th Avenue, Ft. Dodge, Iowa 50501*, Inquiry Number 2122591.5, January 18, 2008.

United States Department of Agriculture, Soil Survey for Webster County, Iowa,
<http://websoilsurvey.nrcs.usda.gov/app/>.

* * * * *

13.0 SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

The following environmental professional was responsible for this report and declares the following statements: I declare that, to the best of my professional knowledge and belief, I meet the definition of *Environmental Professional* as defined in 312.10 of 40 C.F.R., Part 312 and I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 C.F.R. Part 312.

A handwritten signature in black ink, appearing to read "Sarah E. S. Sizemore", written over a horizontal line.

Sarah E. S. Sizemore
Environmental Engineer

PHYSICAL SETTING SOURCE MAP - 2122591.2s



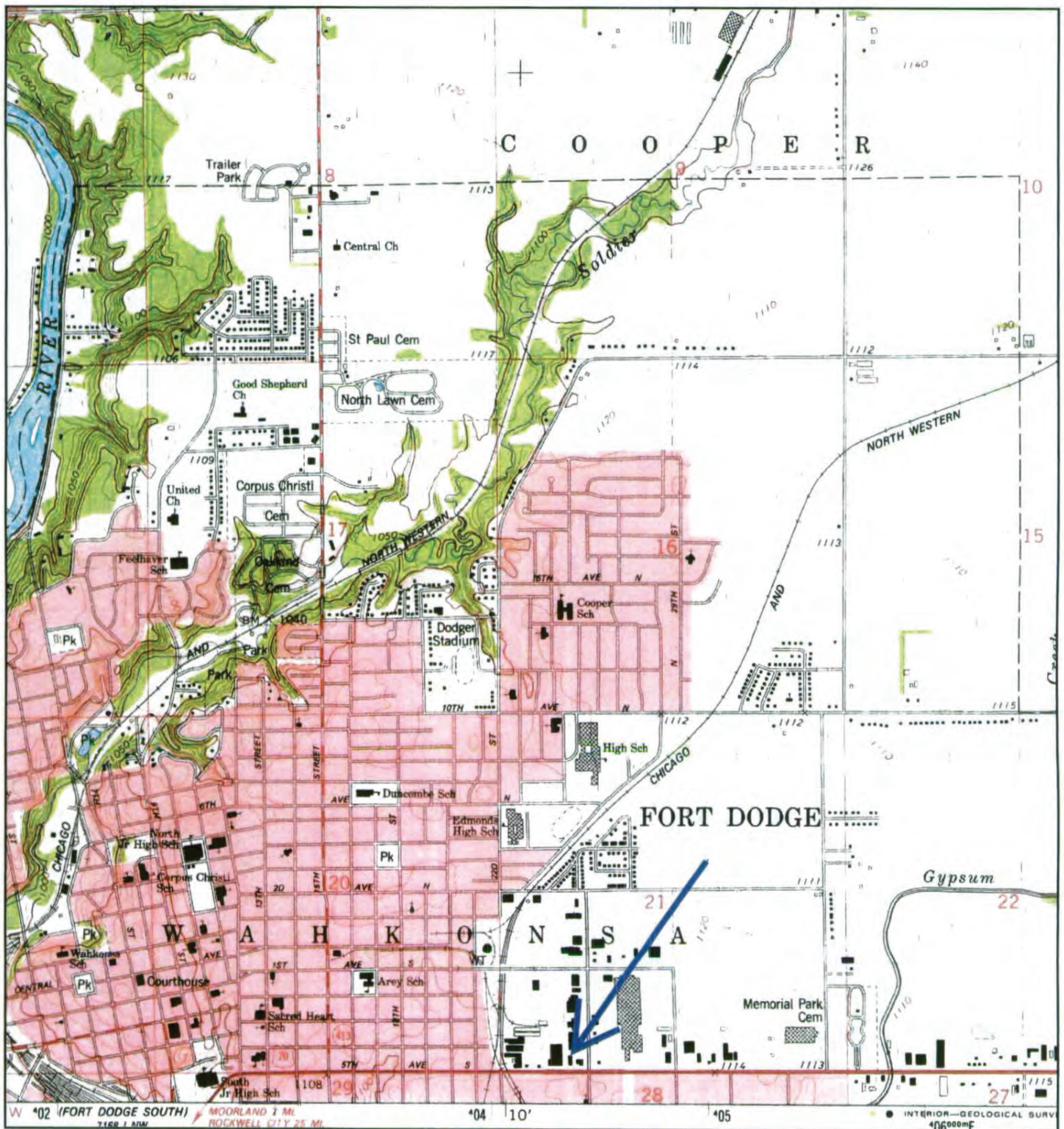
- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- (G) Indeterminate Groundwater Flow at Location
- (CV) Groundwater Flow Varies at Location

SITE NAME: Sunshine Laundry
 ADDRESS: 2422 5th Avenue
 Ft. Dodge IA 50501
 LAT/LONG: 42.5015 / 94.1648

CLIENT: Burns & McDonnell Engineering
 CONTACT: Sarah Sizemore
 INQUIRY #: 2122591.2s
 DATE: January 21, 2008 11:39 am

Historical Topographic Map



<p>N ↑</p> <p>TARGET QUAD NAME: FORT DODGE NORTH MAP YEAR: 1979</p> <p>SERIES: 7.5 SCALE: 1:24000</p>	<p>SITE NAME: Sunshine Laundry ADDRESS: 2422 5th Avenue Ft. Dodge, IA 50501 LAT/LONG: 42.5015 / 94.1648</p>	<p>CLIENT: Burns & McDonnell Engineering CONTACT: Sarah Sizemore INQUIRY#: 2122591.4 RESEARCH DATE: 01/18/2008</p>
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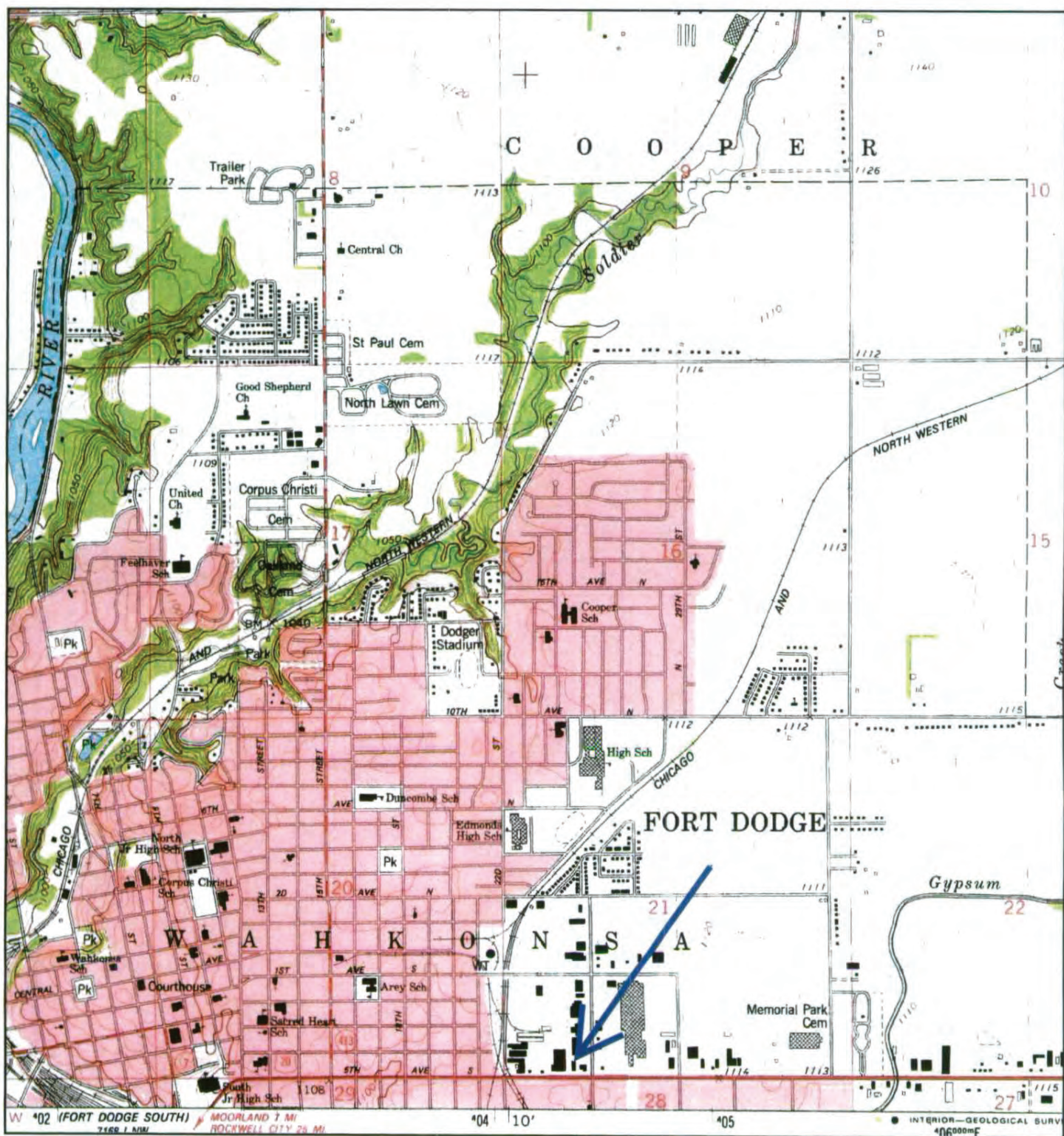


INQUIRY #: 2122591.5

YEAR: 1995

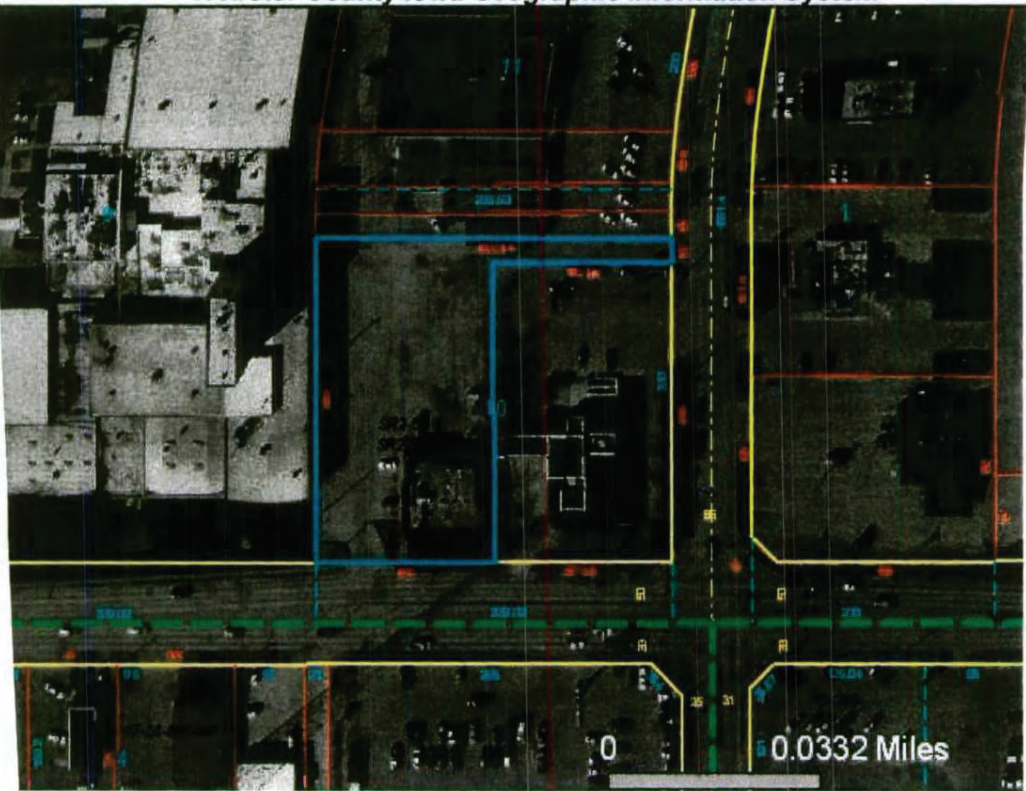
| = 750'





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Webster County Iowa Geographic Information System





CON 12-15
Doc #19305

April 15, 2008

Ms. Cynthia Pavelka
Nestle Purina Pet Care Company
Checkerboard Square
St. Louis, Missouri 63164

March 2008 Phase II Environmental Site Assessment
2422 5th Avenue Site, Fort Dodge, Iowa
Burns & McDonnell Project No.: 48064

Dear Ms. Pavelka:

Burns & McDonnell Engineering Company, Inc. (Burns & McDonnell) is pleased to present the following letter report summarizing field activities associated with the Phase II Environmental Site Assessment (ESA) at 2422 5th Avenue in Fort Dodge, Iowa (Site). The Phase II ESA was conducted to provide information regarding areas of recognized environmental conditions and areas of concern that were identified during a Phase I ESA completed by Burns & McDonnell in January 2008. A Site Map is included as Figure 1 in Attachment A.

UTILITY CLEARANCE

Prior to initiating field activities, Burns & McDonnell requested that utilities be marked by placing calls to Iowa One Call and the City of Fort Dodge. Confirmation of utility clearance for each of the proposed boring locations was conducted in the field by Burns & McDonnell personnel.

SITE HEALTH AND SAFETY PLAN

Prior to initiating field activities, Burns & McDonnell prepared a Health and Safety Plan (HASP) to be followed by Burns & McDonnell and subcontractor personnel during field activities. All conditions of the HASP were followed during field activities.

FIELD ACTIVITIES

Subsurface soil, groundwater, and sub-slab vapor sampling activities were conducted at the Site on March 3-4, 2008. Razek Environmental, LLC (Razek) of Louisburg, Kansas was contracted to conduct direct-push activities at 10 on-site locations for the collection of soil and groundwater samples. The ten probe locations, along with the two sub-slab vapor sample locations, are illustrated on Figure 2 in Attachment A. A Burns & McDonnell geologist field screened the soil for volatile organic compounds (VOCs) using a photoionization detector (PID) during probing activities. Boring logs were





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prepared for each probe location. Soil lithology was determined visually and classified according to the Unified Soil Classification System (USCS). Copies of the boring logs for the ten probe locations are included in Attachment B.

Soil samples were collected by Burns & McDonnell personnel with Razek using a decontaminated 5-foot Macro-Core[®] sampler with acetate liners to continuously sample each probe location to the approximate top of the saturated zone of the aquifer. Each probe location was continuously sampled and screened using a PID to determine sample intervals to be submitted for laboratory analysis. Soil samples were placed directly into laboratory-cleansed sample containers, and placed in a cooler with ice. New, disposable nitrile glove were worn for each sample collected to prevent cross-contamination. All soil samples were labeled, packaged on ice, and delivered to Pace Analytical Services, Inc. (Pace) in Lenexa, Kansas following proper chain-of-custody procedures. All soil samples were submitted for analysis of VOCs.

After continuously sampling and screening each probe location using a PID, a groundwater sample screen with a drive point was advanced into the aquifer for groundwater sample collection. The groundwater sample screen was driven approximately 5 to 6 feet into the aquifer where groundwater entered the screen into the direct-push rods. In some cases, field conditions prohibited the collection of groundwater samples with the screen, and groundwater samples were collected directly through the open borehole. Ground water samples that were collected through the open borehole are noted on the boring logs in Attachment B. When sufficient groundwater was encountered, a groundwater sample was collected using new polyethylene tubing equipped with a check valve. New, disposable nitrile gloves were worn for each sample collected to prevent cross-contamination. All groundwater samples were labeled, packaged on ice, and delivered to Pace following proper chain-of-custody procedures. All groundwater samples were submitted for analysis of VOCs.

Two permanent sub-slab vapor sampling probes were installed and sampled following procedures obtained from the USEPA's *Draft Standard Operating Procedure for Installation of Sub-Slab Vapor Probes and Sampling Using EPA Method TO-15 to Support Vapor Intrusion Investigations*. Copies of the Field Data Air Sampling Forms are included in Attachment C. Sampling probes were constructed of stainless steel materials and installed using a rotary hammer drill. After installation, the probes were allowed to set for at least 24 hours prior to sampling. Chemical (helium) and mechanical leak tests were performed on each soil vapor probe prior to sample collection to check the integrity of probe installation and sample train connections. Both probes passed mechanical leak tests and SVP-2 passed the chemical leak test. The helium field reading (22.5%) at SVP-1 was greater than the allowable concentration of 4.8%. The chemical leak test failure at SVP-1 may have resulted from an incompetent seal between the slab



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and probe creating a potential pathway between the sub-slab and the surface or from the connection fittings from the probe to the sampling train seating improperly. Vapor samples were collected using evacuated batch-certified one liter Summa™ canisters equipped with dedicated flow regulators, integrated particulate filters, and vacuum gauges supplied by Columbia Analytical Services, Inc. (CAS) in Simi Valley, California. All samples were submitted to CAS for analysis of benzene, toluene, ethylbenzene, xylenes (BTEX), chloroform, methylene chloride, tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride following proper chain-of-custody procedures.

SAMPLING LOCATIONS

Former Dry Cleaning Facility Sample Locations

The Phase I investigation identified the Site as a former dry cleaning facility for approximately 8 years. EPA documents indicated PCE stored in the shed had leaked on some occasions. Nine subsurface soil and nine groundwater samples were collected to investigate this *Recognized Environmental Condition and Potential Environmental Concern*. Two sample locations (DP-2 and DP-3) were around the sewer line leaving the building, two sample locations (DP-4 and DP-5) were around the building with one near the backdoor of the facility, one sample location (DP-6) was near the solid waste dumpster, two sample locations (DP-7 and DP-8) were around the cinder block shed, and one sample location (DP-9) was at the storm sewer inlet in the parking lot north and west of the building. One sample location (DP-10) was along the northern boundary of the Site to determine if contaminants were migrating off-site. Two sub-slab vapor (soil gas) samples were collected from beneath the slab of the building to investigate the potential for spills reaching the ground under the building. SVP-1 was located in the utility room near the floor drain in the northeast portion of the facility and SVP-2 was located in the open area in the northwest portion of the facility.

Ferguson Trust Site

The Ferguson Trust site, located at 2503-2507 5th Avenue (southeast of the Site), was identified as a source of petroleum contamination in conjunction with historical ASTs associated with a former gasoline filling station. Previous reports do not indicate the extent of contamination. One sample location (DP-1) was placed to collect one subsurface soil and one groundwater sample near the southeast corner of the building to investigate this *Recognized Environmental Condition and Potential Environmental Concern* to investigate the potential for contaminants migrating onto the Site.



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SOIL ANALYTICAL RESULTS

The laboratory analytical results for the soil samples were compared to either the United States Environmental Protection Agency (USEPA) Region VI Screening Levels for Residential Soil Contact and Protection of Groundwater or the Iowa Statewide Standards for Soil. Iowa Statewide Standards were developed pursuant to Chapter 137, also known as the Land Recycling Program. Sites with contamination levels below these standards are not eligible to be enrolled in the Land Recycling Program and are considered free of contamination. Soil sample analytical results are summarized in Table 1 in Attachment D. A copy of the laboratory analytical report for the soil samples is included in Attachment E.

Laboratory analytical results indicate that PCE was detected in six of the ten samples. All six samples with PCE detections (DP-1/3-4 feet below ground surface [ft bgs], DP-4/2-3 ft bgs, DP-5/1-2 ft bgs, DP-6/5-6 ft bgs, DP-8/6-7 ft bgs, and DP-9/14-15 ft bgs) exceeded the EPA Region VI Protection of Groundwater screening level of 0.003 milligrams per kilogram (mg/kg); one sample (DP-4/2-3 ft bgs, 1.85 mg/kg) exceeded the EPA Region VI Residential Soil screening level of 0.55 mg/kg; one sample (DP-9/14-15 ft bgs, 22.1 mg/kg) exceeded the statewide standard soil screening level of 5.7 mg/kg. Trichloroethene (TCE) was detected in two of the ten samples (DP-8/6-7 ft bgs, DP-9/14-15 ft bgs) and both exceeded the EPA Region VI Protection of Groundwater screening level of 0.003 mg/kg; one sample (DP-9/14-15 ft bgs, 0.052 mg/kg) exceeded the residential soil screening level of 0.043 mg/kg. Cis-1,2-Dichloroethene (cis-1,2-DCE) was detected at DP-8/6-7 ft bgs at a concentration of 0.0148 mg/kg, below applicable soil screening levels. See Table 1 in Attachment D for a summary of surface soil analytical data.

GROUNDWATER ANALYTICAL RESULTS

The laboratory analytical results for the groundwater samples were compared to USEPA's Maximum Contaminant Levels for Drinking Water (MCLs). Groundwater sample analytical results are summarized in Table 2 in Attachment D. A copy of the laboratory analytical report for the groundwater samples is included in Attachment E.

Laboratory analytical results indicated positive detections of chloroethane, cis-1,2-DCE, trans-1,2-DCE, PCE, TCE, 1,2,4-Trimethylbenzene, and vinyl chloride in the groundwater samples collected at the Site. PCE was detected at all sample locations, except DP-10, with concentrations above the MCL of 0.005 milligrams per liter (mg/L) and the highest detection at DP-9 (2.130 mg/L). TCE was detected at DP-6 (0.0379 mg/L) and DP-8 (0.103 mg/L) above the MCL of 0.005 mg/L and below the MCL at DP-9 (0.0042 mg/L). Cis-1,2-DCE was detected at four sample locations and trans-1,2-DCE

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was detected at three sample locations. Concentrations were detected above the MCLs for cis-1,2-DCE and trans-1,2-DCE of 0.07 mg/L and 0.1 mg/L, respectively, at only one location, DP-8 (0.302 mg/L and 0.139 mg/L). Vinyl chloride was detected at one sample location, DP-8 (0.0023 mg/L), above the MCL of 0.002 mg/L. Chloroethane was detected at DP-8 and 1,2,4-Trimethylbenzene was detected at DP-9, however no MCLs exist for these chemicals.

SUB-SLAB VAPOR ANALYTICAL RESULTS

The laboratory analytical results for the sub-slab vapor samples were compared to calculated sub-slab screening levels since screening levels for sub-slab data are not available for Iowa. The calculated screening levels are based on the USEPA's 2002 *Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance)*. The sub-slab screening levels were developed by combining risk-based concentrations for indoor air with an attenuation factor to account for migration across a building slab. The indoor air screening levels were calculated based on a target cancer risk level of 1 in 100,000 (1E-05) or a noncancer hazard index of 0.1, whichever value is more protective (i.e., lower). The calculated risk-based concentrations for indoor air were adjusted by a factor of 0.1 to account for attenuation through the concrete slab. The attenuation factor of 0.1 represents the conservative default value provided in the EPA Guidance. Sub-slab vapor sample analytical results are summarized in Table 3 in Attachment D. A copy of the laboratory analytical report for the groundwater samples is included in Attachment F.

Laboratory analytical results indicated positive detections of PCE and m,p-Xylenes. PCE was detected in both samples (SVP-1, 170 $\mu\text{g}/\text{m}^3$; SVP-2, 630,000 $\mu\text{g}/\text{m}^3$) above the calculated screening level of 67 $\mu\text{g}/\text{m}^3$. m,p-Xylenes were detected in SVP-1, 4.9 $\mu\text{g}/\text{m}^3$, below the calculated screening level of 195 $\mu\text{g}/\text{m}^3$.

EQUIPMENT DECONTAMINATION

All down-hole probing and groundwater sampling equipment was decontaminated using potable water and non-phosphate detergent and rinsed with potable water to prevent cross-contamination between samples.

INVESTIGATION DERIVED WASTE

The soil cuttings and decontamination/purge fluids generated from the probe locations were placed into two United Nations approved 55-gallon drums and stored on-site.



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The drums were labeled with the date of generation, contents (soil cuttings, decontamination/purge water, etc.), and Site name.

SUMMARY

Samples were collected from areas that were, based on professional judgment, most likely locations for contamination to be found. A total of ten soil samples, ten groundwater samples, and two sub-slab vapor samples were collected at the Site by Burns & McDonnell personnel on March 4, 2008. Soil samples were generally collected from depths most likely to contain contamination. Groundwater samples were collected from direct-push rods equipped with a sample screen driven to intervals between 15 to 25 ft bgs depending on field conditions.

Laboratory analytical results indicate soil impacts above Iowa Statewide Standards for Soil for PCE at one location. PCE and TCE each exceeded USEPA Region VI Residential Soil Contact screening levels at two locations. USEPA Region VI Protection of Groundwater screening levels for PCE were exceeded at six locations and for TCE at one location. Cis-1,2-DCE was not detected above USEPA Region VI screening levels. Screening level exceedances were identified in samples from the following intervals: 1-2 ft bgs, 2-3 ft bgs, 3-4 ft bgs, 5-6 ft bgs, 6-7 ft bgs, and 14-15 ft bgs. Soil analytical results indicate the Site is likely a source of PCE contamination.

Laboratory analytical results indicate groundwater impacts above USEPA MCLs for PCE at all locations, except DP-10. TCE was also detected above MCLs at two locations. In addition to PCE and TCE exceedances at DP-8, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride were also detected above MCLs. Groundwater analytical results indicate the Site is likely a source of PCE contamination. Groundwater flow direction was not determined during the investigation but based on two reports obtained from the Iowa Department of Natural Resources for sites in the area, groundwater flow is to the northeast or northwest.

Sub-slab vapor laboratory analytical results for both samples indicate exceedances of calculated screening levels for PCE.

In summary the following areas were identified as having been impacted above levels of concern at the Property.

- 1 Soils in the areas near the southeast corner and immediately north of the building, near the solid waste dumpster, north of the shed, and near the storm sewer inlet and along the storm sewer line exhibited concentrations above



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screening levels.

- 2 Groundwater over the entire site (with the exception of the most downgradient sample) exhibited PCE concentrations above the MCL.
- 3 Sub-slab vapor samples collected from two locations exhibited exceedances of the screening levels for PCE.

If you have any questions regarding this report, or other Site activities, please contact me at (816) 822-3322.

Respectfully,

Greg A. Gorman
Project Manager

Attachment A – Figures
Attachment B – Boring Logs
Attachment C – Field Data Air Sampling Forms
Attachment D – Tables
Attachment E – Laboratory Analytical Report – Soil and Groundwater
Attachment F – Laboratory Analytical Report – Sub-Slab Vapor

ATTACHMENT A
Figures

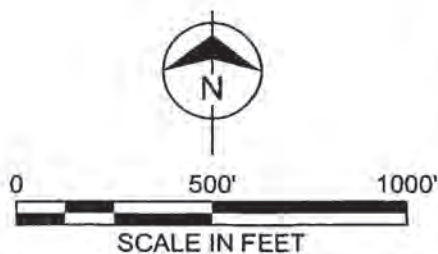
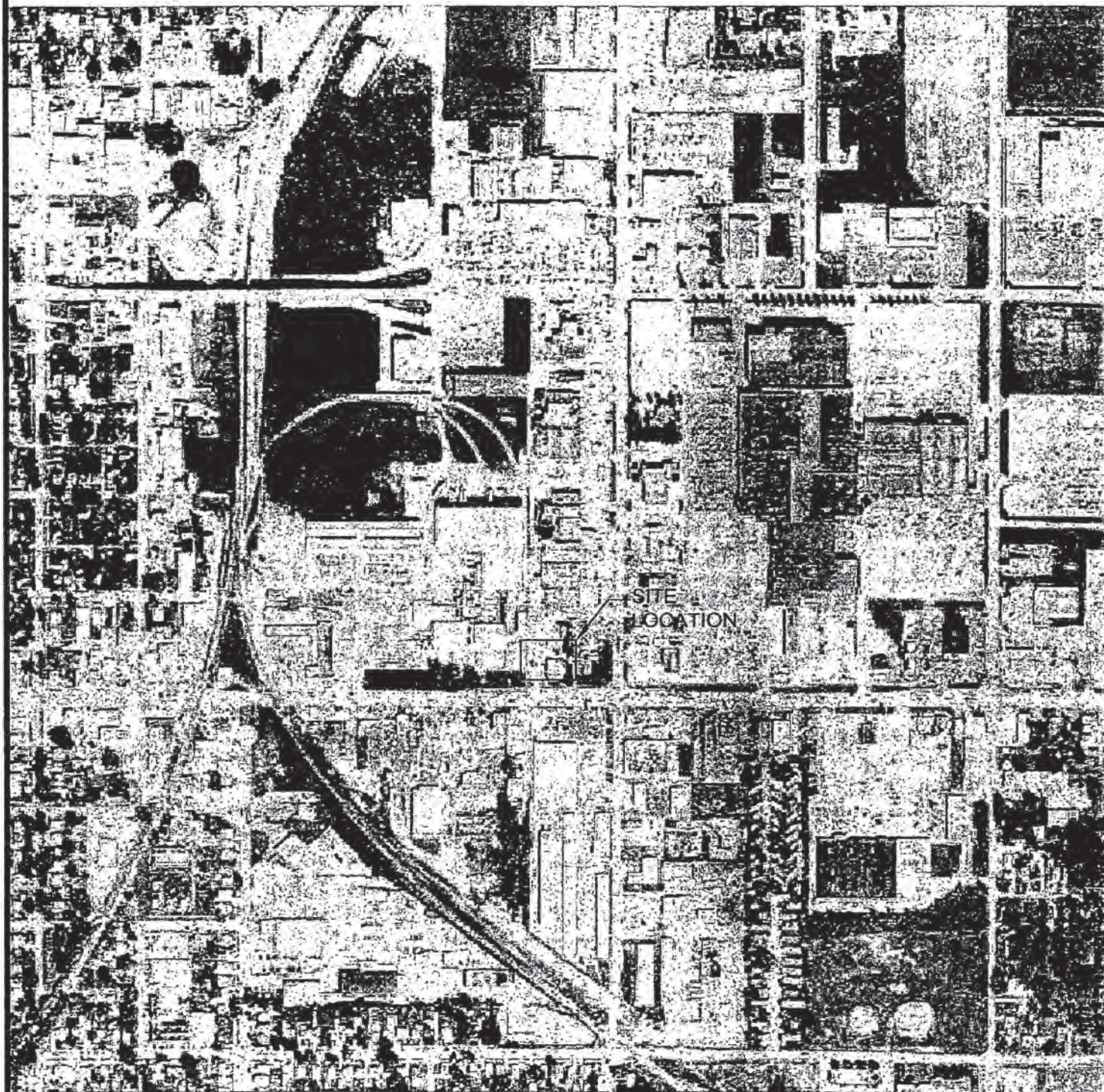


Figure 1
SITE MAP
NESTLE PURINA
PET CARE PRODUCTS
2422 5TH AVENUE SOUTH
FORT DODGE, IOWA

BUILDING

SOUTH 25TH STREET

DP-10

NESTLE PURINA
PET CARE PRODUCTS

DP-9

DP-8

SHED

DP-7

BUILDING

DP-5

DP-6

DP-4

SVP-2

SVP-1

BUILDING

DP-3

DP-2

DP-1

5TH AVENUE SOUTH



0 50' 100'
SCALE IN FEET

LEGEND

- DIRECT PUSH
- ⊕ SOIL VAPOR PROBE



Figure 2
SAMPLE LOCATIONS
NESTLE PURINA
PET CARE PRODUCTS
2422 5TH AVENUE SOUTH
FORT DODGE, IOWA

ATTACHMENT B
Boring Logs

Drilling Log

Project Name WRPC FORT DOUGE		Project Number 48064		Boring Number DP-1	
Ground Elevation NOT MEASURED		Location 26' S of SE corner of Building		Page 1 OF 2	
Air Monitoring Equipment RID				Total Footage 25'	
Drilling Type DIRECT - PUSH	Hole Size 1 1/4"	Overburden Footage 25'	Bedrock Footage Ø	No. of Samples 4 SOCL → 1 to Lab 1 GW	No. of Core Boxes —
Drilling Company RAZEK ENVIRONMENTAL			Driller(s) TONY PAULTER, SCOTT FARRIS		
Drilling Rig GEOPROBE 6620DT			Type of Sampler 5" MACROCORE W/ ACETATE SLEEVE		
Date 03/04/08		To 03/04/08		Field Observer(s) DAVID BARKER	

Depth (feet)	Description	Class	Blow Count	Recov.	Run/ Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
1	SILT, Trace Sand, Black 10YR 2/1, Stiff, Damp, Medium Plasticity, roots, organic,	ML			1230				0.0	
2				5/5					0.0	
3						SB01			0.0	
4	SANDY CLAY, Trace Gravel, Mottled Grayish Brown 10YR 5/2 to Brownish Yellow 10YR 4/6, Soft, Damp to Moist, Medium to High Plasticity, Iron staining	CL- CH			1233		0.0	0.0	0.0	
5					1234					
6									0.0	
7				3.5/5		SB02			0.0	
8									0.0	
9										
10					1237 1238		0.0	0.0		
11									0.0	
12				5/5		SB03			0.0	
13									0.0	
14									0.0	

BZ=Breathing Zone BH=Bore Hole S=Sample



051601 Form WCD-2-1

Drilling Log Continuation

Project Name <u>NPPC FORT DUNE</u>							Boring Number <u>DP-1</u>			
Project Number <u>46064</u>							Page <u>2 of 2</u>			
							Date <u>03/04/08</u>			
Depth (feet)	Description	Class	Blow Count	Recov.	Run/ Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
14	SILTY CLAY, trace to some sand, Very Dark Grayish Brown (10YR 3/2), stiff to very stiff, damp, Medium Plasticity, Iron staining	CL								
15	CLAY, trace sand, silt, gravel, Dark Gray 10YR 4/1, Soft to Medium, Damp, High Plasticity	CH			1241		0.0	0.0	0.0	
16	15.5-16.5 olive Brown 2.5Y 4/3, increased sand content, wet				1244				0.0	
17				3/5		SB04			0.0	
18									0.0	
19										
20	COMPLETE SOIL BORING /				1247		0.0	0.0		
21	CONTINUE WITH GW BORING				1250					
22				NA		GL021				FINES PLUGGING SCREEN, SAMPLE THROUGH OPEN HOLE
23						1300				
24										
25	BOTTOM OF BOREHOLE 25' hrs				1253					

BZ=Breathing Zone

BH=Bore Hole

S=Sample

Burns &
McDonnell

051601 Form WCD-KC-2-2

Drilling Log

Project Name UAPC FORT DODGE		Project Number 48064		Boring Number DP-2	
Ground Elevation NOT MEASURED		Location 3' N of Property Line 3' W of Plaster		Page 1 of 2	
Air Monitoring Equipment PID				Total Footage 25'	
Drilling Type	Hole Size	Overburden Footage	Bedrock Footage	No. of Samples	No. of Core Boxes
DIRECT-PUSH	1 1/4"	25'	0'	4 SOIL → 1 to 100 1 BW	—
Drilling Company RAZEK ENVIRONMENTAL			Driller(s) TONY POLTER, SCOT FARRIS		
Drilling Rig GEO PROBE 6620DT			Type of Sampler 5' MACROCORE W/ ACETATE SLEEVE		
Date 03/04/08		To 03/04/08		Field Observer(s) DAVID BARKER	

Depth (feet)	Description	Class	Blow Count	Recov.	Run/Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
	ARTIFICIAL FILL, SAND/GRAVEL, ASPHALT TOP 6"				1033					
1	SILT, Black 10YR 7/1, STEFF, DAMP, Medium Plasticity	ML				SB01			0.0	
2			3/5						0.0	
3									0.0	
4										
5	CLAY, Trace Sand, Mottled Grayish Brown 10YR 5/2 to Brownish Yellow 10YR 4/4, Soft to Medium Damp, Medium to High Plasticity, Iron Staining	CL-CH			1035 1036		0.0	0.0	0.0	
6						SB02*			0.0	
7			2/5						0.0	
8										
9										
10	CLAY, Trace Sand, Gravel, silt, Dark Brown 10YR 2/3, Soft, Damp, Medium to High Plasticity	CL-CH			1038 1040		0.0	0.0	0.0	
11									0.0	
12			3/5						0.0	
13	grading to Dark Grayish Brown 10YR 4/2, stiff, Medium Plasticity					SB03			0.0	
14										

BZ=Breathing Zone

BH=Bore Hole

S=Sample



051601 Form WCD-2-1

Drilling Log Continuation

Project Name NPRC FORT DODGE							Boring Number DP-2			
Project Number 48064							Page 2 of 2			
							Date 03/04/08			
Depth (feet)	Description	Class	Blow Count	Recov.	Run/Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
14	CLAY, Trace Sand, silt, very Dark Gray 1042 3/4, Very Soft to Soft, Damp to Moist, Medium to High Plasticity moisture content increasing with depth 17.5 Sand Lense (0.2' thick)	CL-CH								
15					1043					
					1046		0.0	0.0	0.0	
16									0.0	
									0.0	
17				3/5					0.0	
18									0.0	
19										
20	COMPLETE SOIL BORING / CONTINUE WITH GW BORING									
					1050		0.0	0.0		
					1052					
21										
22				NA						SCREEN FROZEN SAMPLED THRU OPEN HOLE AT ~16' bgs
23						GW01 1055				
24										
25	BOTTOM OF BORING 25' bgs									

BZ=Breathing Zone

BH=Bore Hole

S=Sample

Burns & McDonnell

051601 Form WCD-KC-2-2

Drilling Log

Project Name N/ARC FORT DODGE		Project Number 48064		Boring Number DP-3	
Ground Elevation NOT MEASURED		Location 15' W of Main Entrance		Page 1 OF 2	
Air Monitoring Equipment PID				Total Footage 25'	
Drilling Type	Hole Size	Overburden Footage	Bedrock Footage	No. of Samples	No. of Core Boxes
DIRECT - PUSH	1 1/4"	25'	Ø	3 soil → 1 to lab 16W	—
Drilling Company RAZEK ENVIRONMENTAL			Driller(s) TOM DOULTER, SCOTT FARRIS		
Drilling Rig GEOPROBE 6620 DT			Type of Sampler 5' MACROCORE W/ ACETATE SLEEVE		
Date 03/04/08		To 03/04/08		Field Observer(s) DAVID BARKER	

Depth (feet)	Description	Class	Blow Count	Recov.	Run/Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
0	ASPHALT, ARTIFICIAL FILL - SAND/GRAVEL				1141				0.0	
1	SILT, Trace Sand, Black 10YR 2/1, to Very Dark Gray 10YR 3/1, very Stiff to Hard, Dry to Damp, Non to Medium Plasticity	ML		5/5		JB01			0.0	
2									0.0	
3									0.0	
4									0.0	
5	SANDY CLAY, Trace SILT, Very Dark Gray to Brown (10YR 3/2), Soft to Medium, Medium Plasticity, Iron staining	CL			1143 1144		0.0	0.0	0.0	
6	5-10' bgs NO RECOVERY									
7				0/5						
8										
9										
10	CLAY, Trace Sand, Gravel, SILT, Mottled Gray to Brown 10YR 5/2 to Brownish Yellow 10YR 6/2, Soft to Stiff, Damp, Medium Plasticity	CL			1146 1148		0.0	0.0	0.0	
11									0.0	
12	Sand content + decreasing with depth			5/5		JB03*			0.0	
13	CLAY, trace Sand, Dark Gray 10YR 4/1, to Very Dark Gray 10YR 3/1, Medium to Stiff, Damp, Medium to High Plasticity	CL-CH							0.0	
14									0.0	

BZ=Breathing Zone BH=Bore Hole S=Sample



051601 Form WCD-2-1

Drilling Log Continuation

Project Name NPPC FORT DODGE							Boring Number DP-3			
Project Number 48064							Page 2 OF 2			
							Date 03/04/88			
Depth (feet)	Description	Class	Blow Count	Recov.	Run/Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
14	CLAY, trace sand, Dark Gray (10YR 4/1) to Very Dark Gray (10YR 3/1). Medium to stiff, damp, medium to high plasticity	CL-CH								
15	CLAY, Some Sand, trace silt, Gravel, Dark Gray (10YR 4/1) to Very Dark Gray (10YR 3/1), Medium to stiff, damp to moist, medium to high plasticity	CL-CH			1151		0.0	0.0	0.0	
16					1152				0.0	
17				4/5		5804			0.0	
18	moisture content increasing								0.0	
19									0.0	
20	COMPLETE SOIL BORING /				1155		0.0	0.0		
21	CONTINUE W/ GW BORING				1157					
22				NA						
23						GW01 1204				
24										
25	BOTTOM OF BORING 25' bgs				1200					

PUSHED TO 25'
WITH SCREEN,
NO WATER
INTO SCREEN,
SAMPLED THRU
OPEN BOREHOLE
AT ~16' bgs

Drilling Log

Project Name NPPC FORT DODGE		Project Number 48064		Boring Number DP-4	
Ground Elevation NOT MEASURED		Location 3' N of NW corner of building 15' W of NW corner of building		Page 1 OF 2	
Air Monitoring Equipment PID				Total Footage 25'	
Drilling Type DIRECT PUSH	Hole Size 1 1/4"	Overburden Footage 25'	Bedrock Footage 0'	No. of Samples 4 SOIL - 1 to lab 1 GW	No. of Core Boxes —
Drilling Company RAZEK ENVIRONMENTAL			Driller(s) TONY POULTER, SCOTT FARRIS		
Drilling Rig GEDPROBE 6620DT			Type of Sampler 5' MACROCORE w/ ACETATE SLEEVE		
Date 03/04/08		To 03/04/08		Field Observer(s) DAVID BARKER	

Depth (feet)	Description	Class	Blow Count	Recov.	Run/ Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
1	SILT with Artificial Fill sand, Gravel, Black 10YR 2/1, Very Stiff, Dry, Non Plastic					0940			0.0	
2			5/5			SB01*			0.2	
3	SILT, Fine clay, Sand, Black 10YR 2/1, Very Stiff to Hard, Damp, Non to Medium Plasticity	ML							0.4	
4									0.0	
5	CLAY, Fine Sand, Mottled Grayish Brown 10YR 5/2 to Brownish Yellow 10YR 6/6, Soft to Medium, Damp, Medium to High Plasticity, Iron Staining	CL-CH				0943 0944	0.0	0.0	0.0	
6									0.0	
7			5/5						0.0	
8									0.0	
9									0.0	
10	CLAY, Fine Sand, Gravel, Silty, Dark Brown 10YR 2/3, Soft, Damp, Medium to High Plasticity	CL-CH				0945 0947	0.0	0.0	0.0	
11									0.4	
12			5/5			SB02			0.0	
13	grading to Dark Grayish Brown 10YR 4/2 SHAL, Medium Plasticity								0.2	
14									0.0	

BZ=Breathing Zone BH=Bore Hole S=Sample

Drilling Log Continuation

							Boring Number <u>DP-4</u>			
Project Name <u>NPPC FORT DODGE</u>							Page <u>2 of 2</u>			
Project Number <u>48064</u>							Date <u>03/04/08</u>			
Depth (feet)	Description	Class	Blow Count	Recov.	Run/ Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
14	CLAY, trace sand, gravel, silt, Dark Grayish Brown (10YR 4/2), stiff, damp, medium plasticity	CL- CH							0.0	
15					0950 0951		0.0	0.0	0.0	
16	CLAY, trace sand, Dark Gray, 10YR 4/1, to Very Dark Gray, 10YR 3/1, medium to stiff, damp, medium to high plasticity	CL- CH							0.0	
17				5/5		SR04			0.0	
18									0.0	
19									0.0	
20					0954 0956		0.0	0.0	0.0	
21	COMPLETE SOIL BORING / CONTINUE WITH GW BORING									
22				NA						
23						GW01 1003				
24										WL=16.8'
25	BOTTOM OF BORING - 25' logs				1000					

BZ=Breathing Zone

BH=Bore Hole

S=Sample

Burns &
McDonnell

051601 Form WCD-KC-2-2

Drilling Log

Project Name NRPC FORT DODGE		Project Number 48064		Boring Number DP-5	
Ground Elevation NOT MEASURED		Location 6' N of building, immediately E of back door		Page 1 OF 2	
Air Monitoring Equipment PID				Total Footage 20'	
Drilling Type DIRECT-PUSH	Hole Size 1 1/4"	Overburden Footage 20'	Bedrock Footage 0'	No. of Samples 3 SOIL → 1 to lab 1 GW	No. of Core Boxes —
Drilling Company RAZEK ENVIRONMENTAL			Driller(s) TIMY PAULTER, SCOTT FARRIS		
Drilling Rig GEOPROBE 6620 DT			Type of Sampler 5' MACROCORE W/ ACETATE SLEEVE		
Date 03/04/08		To 03/04/08		Field Observer(s) DAVID BARKER	

Depth (feet)	Description	Class	Blow Count	Recov.	Run/Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
1	SAND with silt and clay, Dark Yellowish Brown (10YR 4/4 to 10YR 4/6), Damp, Fine to Coarse Grained, Medium to Dense	SM SC		2/5	1440	SB01			0.0	
2										
3										
4										
5	CLAY, weak sand, Mottled Grayish Brown (10YR 5/2) to Brownish Yellow (10YR 6/4), Medium, Damp, Medium to High Plasticity, Iron Staining 6-7 Sandy, wet	CL- CH		3/5	1443 1444	SB02	0.0	0.0	0.0	
6										
7										
8										
10	10-11 Sandy, wet				1447 1448	SB03	0.0	0.0	0.0	
11										
12										
13										
14	CLAY, trace some silt, trace sand, Dark Gray (10YR 4/1), Medium to stiff, medium to High Plasticity	CL- CH		4/5				0.0	0.0	

BZ=Breathing Zone BH=Bore Hole S=Sample



051601 Form WCD-2-1

Drilling Log Continuation

Project Name NPPC FORT DODGE						Boring Number DP-5				
Project Number 48064						Page 2 of 2				
						Date 05/04/08				
Depth (feet)	Description	Class	Blow Count	Recov.	Run/ Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
14	CLAY, trace-some silt, trace sand, Dark Gray (DRY) CL medium to stiff, medium to high plasticity	CL								
15		CH			1450		0.0	0.0		
16	COMPLETE SOIL BORING/ CONTINUE WITH GW BORING				1452					
17				NA		GW01				DRIP SCREEN PLUGGED WITH FINE SAMPLE OUT OF OPEN HOLE AT ~15-16' bgs
18						1455				
19										
20	BOTTOM OF BOREHOLE 20' bgs				1454					
21										
22										
23										
24										
25										

BZ=Breathing Zone

BH=Bore Hole

S=Sample

Burns &
McDonnell

051601 Form WCD-KC-2-2

Drilling Log

Project Name NPPC FORT DODGE		Project Number 48064		Boring Number DD-7th DP-6	
Ground Elevation NOT MEASURED		Location 10' west of SW corner of shed, 6' S		Page 1 OF 2	
Air Monitoring Equipment PID				Total Footage 20'	
Drilling Type DIRECT PUSH	Hole Size 1 1/4"	Overburden Footage 20'	Bedrock Footage 0'	No. of Samples 3 SOIL - 1 to 106 1 GW	No. of Core Boxes —
Drilling Company RAZEK ENVIRONMENTAL			Driller(s) TONY PAULTER, SCOTT FARRIS		
Drilling Rig GEOPRIDE 6620 DT			Type of Sampler 5' MACROCORE W/ ACETATE SLEEVE		
Date 03/04/08		To 03/04/08		Field Observer(s) DAVID BARKER	

Depth (feet)	Description	Class	Blow Count	Recoy.	Run/Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
	ASPHALT FILL MATERIAL - SAND/GRAVEL				1408					
1	SILT, trace sand, Black 10YR 4, SAT, Damp, Non Plastic	ML				SB01			0.0	1
2			3/5						0.0	2
3									0.0	3
4										4
5	CLAY, trace sand, Mottled Grayish Brown (10YR 5/2), to Brownish Yellow (10YR 4/6), Medium to SAT, Damp. Medium to High Plasticity, Iron Staining	CL - CH			1411 1412		0.0	0.0	0.0	5
6									0.0	6
7			4/5						0.0	7
8									0.0	8
9									0.0	9
10	becomes stiffer with depth				1415 1417		0.0	0.0	0.0	10
11	wet								0.0	11
12			3/5			SB03			0.0	12
13	CLAY, trace sand, silt, gravel, Dark Gray 10YR 4/1, Medium, Damp, Medium to High Plasticity	CL - CH							0.0	13
14										14

BZ=Breathing Zone BH=Bore Hole S=Sample



051601 Form WCD-2-1

Drilling Log Continuation

Project Name NPPC FORT DODGE						Boring Number DP-7^{DP} DP-6				
Project Number 48064						Page 2 of 2				
						Date 03/04/08				
Depth (feet)	Description	Class	Blow Count	Recov.	Run/ Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
14	CLAY, trace sand, silt, gravel, Gray Gray (10YR 4/1), Medium Damp, Medium to High Plasticity COMPLETE SOIL BORING / CONTAINS w/ GW BORING	CL- CH								DROPS CABLE PLUGGED; GW SAMPLE THRU OPEN BOREHOLE AT ~15-16' bgs
15					1420		0.0	0.0		
16					1422					
17				NA						
18						GW61 1430				
19										
20	BOTTOM OF BORING 20' bgs					1424				
21										
22										
23										
24										
25										

BZ=Breathing Zone

BH=Bore Hole

S=Sample



051601 Form WCD-KC-2-2

Drilling Log

Project Name WPPRC FORT DODGE		Project Number 48064		Boring Number DP-058 DP-7	
Ground Elevation NOT MEASURED		Location 6' W of SW corner of shed		Page 1 of 2	
Air Monitoring Equipment PZD				Total Footage 25	
Drilling Type	Hole Size	Overburden Footage	Bedrock Footage	No. of Samples	No. of Core Boxes
DIRECT PUSH	1 1/4"	25'	0'	4 SOIL → 1 to lab 1 GW	—
Drilling Company RAZER ENVIRONMENTAL			Driller(s) TONY PAULER, SCOTT FARRIS		
Drilling Rig GEORROBE 6620DT			Type of Sampler 5' MACROCORE WITH ACETATE SLEEVE		
Date 03/04/08		To 03/04/08		Field Observer(s) DAVID BARKER	

Depth (feet)	Description	Class	Blow Count	Recov.	Run/Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
	ASPHALT, FILL MATERIAL - SAND/GRAVEL				1503					
1	SILT, trace sand, Black 10YR 4/1, stiff to very stiff, damp, medium plasticity	CL-ML							0.0	
2				3/5		SB01			0.0	
3									0.0	
4										
5	CLAY, with sand and silt, Greenish Gray 5GY 5/1, damp, soft, high plasticity	CH			1506				0.0	
6					1507				0.0	
7	CLAY, trace sand, Mottled Grayish Brown 10YR 5/2 to Brownish Yellow 10YR 6/2, soft to medium, damp, medium to high plasticity, iron staining	CL-CH							0.0	
8				5 1/5		SB02			0.0	
9									0.0	
10					1510				0.0	
11	CLAY, dark Grayish Brown 10YR 4/2, very stiff, damp, medium plasticity, iron staining	CL			1511				0.0	
12				5 1/5					0.0	
13									0.0	
14									0.0	

BZ=Breathing Zone BH=Bore Hole S=Sample



051601 Form WCD-2-1

Drilling Log Continuation

							Boring Number <u>DP-7</u>			
Project Name <u>NPPC FORT DORGE</u>							Page <u>2 of 2</u>			
Project Number <u>48064</u>							Date <u>03/04/08</u>			
Depth (feet)	Description	Class	Blow Count	Recov.	Run/ Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
14	CLAY, trace to some sand, silt, gravel, Very Dark Gray 10YR 2/1, stiff to Very Stiff, Damp, Medium to High Plasticity	CH				5B038				
15	CLAY, Dark Grayish Brown 10YR 4/2, Soft, Damp to Medium, High Plasticity	CH			1514 1515		0.0	0.0		
16									0.0	
17	CLAY, Dark Gray (10YR 4/1) to Very Dark Gray 10YR 2/4, stiff to Very Stiff, Damp, Medium Plasticity	CL		4/5					0.0	
18						5B04			0.0	
19									0.0	
20	COMPLETE SOIL BORING /				1519 1520		0.0	0.0		
21	CONTINUE W/ GW BORING									
22				NA		GW01				
23						1524				
24										
25	BOTTOM OF BOREHOLE 25' ⁶ / ₈				1522					

BZ=Breathing Zone

BH=Bore Hole

S=Sample



051601 Form WCD-KC-2-2

Drilling Log

Project Name NAPC FORT DODGE		Project Number 48064		Boring Number DP-8	
Ground Elevation NOT MEASURED		Location 4' N of NW corner of slab		Page 1 OF 2	
Air Monitoring Equipment PID				Total Footage 20'	
Drilling Type DIRECT PUSH	Hole Size 1 1/4"	Overburden Footage 20'	Bedrock Footage 0'	No. of Samples 3 SOIL to 1 lb 1 GW	No. of Core Boxes —
Drilling Company PAZEK ENVIRONMENTAL			Driller(s) TONY PAULER, SCOTT FARRIS		
Drilling Rig GEO PROBE 6620 DT			Type of Sampler 5' MACRO CORE w/ ACETATE SCREEN		
Date 03/04/08		To 03/04/08		Field Observer(s) DAVID BARKER	

Depth (feet)	Description	Class	Blow Count	Recov.	Run/Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
1	ASPHALT, ARTIFICAL FILL - SAND/GRAVEL				1330					
2	SILT, FILL MATERIAL, BLACK 10YR 2, stiff, damp, Nonplastic	ML							0.0	
3	SILT, Trace sand, Black 10YR 2, stiff, damp, Nonplastic	ML	5/5			SB01			0.0	
4									0.0	
5	CLAY, trace sand, mottled Grayish Brown (10YR 5/4) to Brownish Yellow (10YR 6/4), soft, damp to moist, Medium to High Plasticity, Iron staining	CL-CH			1333 1334		0.0	0.0	0.0	
6						SB02			0.0	
7			5/5			DUP-7			0.0	
8	becomes stiffer with depth, less mottling								0.0	
9									0.0	
10	SANDY CLAY, Dark Gray 10YR 4/1, Medium, wet, Medium to High Plasticity	CL			1336 1337		0.0	0.0	0.0	
11										
12	CLAY, trace sand, silt, gravel, Dark Gray (10YR 4/1), Soft to medium, damp, High Plasticity	CH	3/5			SB03				
13										
14										

BZ=Breathing Zone BH=Bore Hole S=Sample



051601 Form WCD-2-1

Drilling Log Continuation

Project Name NDPC FORT DODGE						Boring Number DP-8				
Project Number 48064						Page 2 of 2				
						Date 03/04/00				
Depth (feet)	Description	Class	Blow Count	Recov.	Run/ Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
14	CLAY, trace sand, silt, gravel, Dark gray (gray), Soft to medium. Damp, High Plasticity	CH								
15	COMPLETE SOIL BORING/ CONTINUE w/ GW BORING				1340		0.0	0.0		
16					1342					
17										
18					NA	GW01				
19						1353				COLLECT GW SAMPLE THRU OPEN BOREHOLE ~15' $\frac{1}{2}$
20					1344					
21	BOTTOM OF BOREHOLE 20' logs									
22										
23										
24										
25										

BZ=Breathing Zone

BH=Bore Hole

S=Sample



051601 Form WCD-KC-2-2

Drilling Log

Project Name WAPC FORT DODGE		Project Number 48064		Boring Number DP-9	
Ground Elevation NOT MEASURED		Location 55' N. of NW corner of building		Page 1 OF 2	
Air Monitoring Equipment PID				Total Footage 26'	
Drilling Type	Hole Size	Overburden Footage	Bedrock Footage	No. of Samples	No. of Core Boxes
DIRECT PUSH	1 1/4"	26'	0'	3 SOIL & 1 G.W.	—
Drilling Company RAZEK ENVIRONMENTAL			Driller(s) TONY DOULTER, SCOTT FARRIS		
Drilling Rig GEOPROBE 6620 DT			Type of Sampler 5' MACROCORE w/ ALUMINUM SLEEVE		
Date 03/04/08		To 03/04/08		Field Observer(s) DAVID BARKER	

Depth (feet)	Description	Class	Blow Count	Recov.	Run/Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
	ASPHALT / ARTIFICIAL FILL - GRAVEL / SAND									
1	SILT WITH ARTIFICIAL FILL (Sand/Gravel) Black 10YR 4/1, ML STIFF (very STIFF, Dry, Nonplastic)									
2	CLAYEY SILT, BLACK 10YR 2/1, STIFF / VERY STIFF, Dry, Non to Medium Plasticity	ML		5/5		SB01				
3										
4										
5	CLAY, Trace SAND, Mottled Grayish Brown 10YR 5/2 to Brownish Yellow 10YR 6/4, Soft to Medium, Damp. Medium to High Plasticity, Iron Staining	CL-CH					0.0	0.0	0.0	
6										
7				2/5		SB02				
8										
9										
10	Grading to Dark Gray 10YR 2/1,						0.0	0.0	0.0	
11										
12				5/5						
13										
14	Sand Content Increasing									

BZ=Breathing Zone BH=Bore Hole S=Sample



051601 Form-WCD-2-1

Drilling Log Continuation

Project Name <u>NPPC FORT DODGE</u>							Boring Number <u>DP-9</u>			
Project Number <u>48064</u>							Page <u>2 of 2</u>			
							Date <u>03/04/03</u>			
Depth (feet)	Description	Class	Blow Count	Recov.	Run/ Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
14	CLAY, Very Dark Gray, 10YR 7/1, 0.50 some Silt,	CL-				5B03K			0.0	
15	Trace Sand, Very Dark Gray 10YR 3/1, Medium Consistency, Medium to High Plasticity, Damp	CH			0904 0900		0.0	0.0	0.1	
16	Becoming Moist to Saturated			2/5					0.2	
17									0.3	
18										
19										
20	COMPLETE SOIL BORING /				0910		0.0	0.0		
21	CONTINUE WITH GW BORING				0915					
22				NA						
23										
24						SW01 0921 DUP-1				
25										WL = 9.25' bgs
26	BOTTOM OF BORING 26' bgs				0920					

BZ=Breathing Zone

BH=Bore Hole

S=Sample



051601 Form WCD-KC-2-2

Drilling Log

Project Name NPPC FORT DODGE		Project Number 48064		Boring Number DP-10	
Ground Elevation NM		Location 130' N / 25' W of NW corner of building		Page 1 OF 2	
Air Monitoring Equipment PID				Total Footage 20'	
Drilling Type DIRECT-PUSH	Hole Size 1 1/4"	Overburden Footage 20'	Bedrock Footage Ø	No. of Samples 3 SOIL (1 SUBMITTER) 1 GW	No. of Core Boxes —
Drilling Company RAZEK ENVIRONMENTAL			Driller(s) TONY POWLER, SCOTT FARRIS		
Drilling Rig GEOPROBE 6620 DT			Type of Sampler 5' MACROCORE w/ ACETATE SLEEVE		
Date 03/04/08		To 03/04/08		Field Observer(s) DAVID BARKER	

Depth (feet)	Description	Class	Blow Count	Recov.	Run/ Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
	Asphalt, Fill				0705					
1	SOIL w/CLAY, Very Dark Gray loess 3/1, Medium Plasticity, ML Dry (Damp), Stiff, CLAY OLIVE Gray ST 5/2 to 2'	ML							0.0	1
2	SILT FINE Sand, Thin Clay, Black loess 3/1, NonPlastic, Damp, Stiff	ML		5/5		SB01			0.0	2
3									0.0	3
4									0.0	4
5					0710				0.0	5
6					0711		0.0	0.0	0.0	6
7	SANDY CLAY, Dark Yellowish Brown 10YR 4/4, Medium Plasticity Damp, Medium Consistency	CL		1/5		SB02			0.0	7
8										8
9										9
10					0715				0.0	10
11	CLAY, SOME SAND, TRACER GAMBLE, Grayish Brown 10YR 5/2 to Dark Grayish Brown 10YR 4/2, Damp, Medium Consistency, Medium Plasticity, Iron staining	CL		5/5	0716		0.0	0.0	0.0	11
12									0.0	12
13									0.0	13
14									0.0	14

BZ=Breathing Zone

BH=Bore Hole

S=Sample



051601 Form WCD-2-1

Drilling Log Continuation

Project Name NPPC FORT DODGE							Boring Number DP-10			
Project Number 48064							Page 2 OF 2			
							Date 03/04/08			
Depth (feet)	Description	Class	Blow Count	Recov.	Run/ Time	Sample Desig.	PID (ppm)			Remarks/ Water Levels
							BZ	BH	S	
14	CLAY, Very Dark Gray, 10YR 3/1, Damp to Moist, Medium to High Plasticity, the Stiff	CL-CH				SB03A			0.0	
15	BORE HOLE LOGGING / SOIL SAMPLING				0720		0.0	0.0	0.0	
16	COMPLETED TO 15' bgs; BOREHOLE ADVANCED FURTHER FOR GROUNDWATER SAMPLING				0722					
17										
18										
19										
20	CONTINUE GW BORING				0725					NO WATER ENCOUNTERED WILL WAIT 15 MIN/ TO SEE IF WATER COMES IN
21					0745 0750					
22										0750 NO WATER IN SCREEN, PULL ROPS TO GO DEEPER; WATER ENTERED HOLE WHEN PULLING ROPS WELL SAMPLE
23										
24										
25					0753 0755 0805					WL = 22.5
26										
27						GW01 0830				
28										
29	BOTDM OF BOREHOLE 29' bgs				0801					

BZ=Breathing Zone

BH=Bore Hole

S=Sample



051601 Form WCD-KC-2-2

ATTACHMENT C
Field Data Air Sampling Forms

FIELD DATA AIR SAMPLING FORM

Site Name: FORT DODGE IA
NESTLE PURINA/SUNSHINE LAUNDRY

Sampler: DB

Sample Identification: SVP-1 / ARO1

Date Sampled: 03/04/08

Sample Location(s): ROOM IN NE CORNER; 5' E of W wall, 2' S of N wall

Canister Serial
#: 25C00460 / 83136 / 1003803
WPC LABEL CAS

Flow Regulator Serial
#: IV-25 / 0A00005

Environmental Conditions

Outdoor Temperature: 28°F Barometric Pressure: 29.841 Relative Humidity: 63%

Wind Speed/Direction: SE 4 Comments: _____

Preliminary Screening

Instrumentation: PID Calibration Date: 3/3/08 Time: 1547 am/pm

Field Reading(s): 0.3 (ppm)/ _____ (ppm)/ _____ (ppm)/ _____ (ppm)

Location(s): UTILITY ROOM

Mechanical Leak Test

Time	Pressure
Start: <u>1837</u> am/pm	<u>28</u> "Hg
Stop: <u>1847</u> am/pm	<u>28</u> "Hg

Chemical Leak Test

Leak Test Compound: HELIUM
Shroud Reading: 47.5% (ppm/%) x 0.1 =
Allowable Concentration 4.8% (ppm/%)
Tedlar bag reading 22.5% (ppm/%)

Air Sampling

Time	Pressure	Controller Flow
Start: <u>1847</u> am/pm	<u>28</u> "Hg	<u>15 min / 1L</u>
Stop: <u>1902</u> am/pm	<u>4.5</u> "Hg	_____
Start: _____ am/pm	_____ "Hg	_____
Stop: _____ am/pm	_____ "Hg	_____

BUILDING QUESTIONNAIRE

Building Type: Residential/Commercial/Multi-Use

Owner/Tenant: SUNSHINE LAUNDROMAT

Address: 2422 5TH AVE SOUTH

Describe Building Uses: CAUNDRIMATE¹⁸, DELI, TANNING

Smoker(s): Y N

Product (Cigars, Pipe, Cigarettes): VARIOUS

Number
Smoked/Day: 7

Basement/Crawl Space: Y/N Ventilated: ^{NA}Y/N Living Quarters: ^{NA}Y/N

Basement

Activities: NA

Private Well: ☒ Sump: ☒ Cistern: ☒ In Use/Plugged: ☒

Recent Remodeling: Y Activities (painting, new carpet, new cabinets): Y
NA

VOC sources (hobbies, paints, solvents, gasoline, etc): COMMERCIAL PRODUCTS - SEE A

etc): COMMERCIAL PRODUCTS - SEE ATTACHED LIST

Cleaning Products and

Storage: OPEN SHELVES ON NW CORNER OF ROOM

Attached Garage: ~~Y~~~~N~~

Garage Storage (cars, lawn mower, etc):

Furnace Type (Oil, Natural Gas, Propane): _____ Furnace Intake: Inside/Outside

Additional Heating Sources (space heater, etc): _____ Fuel Type: _____

Comments:

BUILDING QUESTIONNAIRE (cont.)

CHEMICAL INVENTORY

[illegible]

FIELD DATA AIR SAMPLING FORM

FORT DODGE IOWA

Site Name: NESTLE PURINA / SUNSHINE LAUNDRYSampler: ABSample Identification: SUP-2 / ARO1Date Sampled: 03/04/08Sample Location(s): Room IN NW CORNER ; 8' S of N wall, 15' E of W wall

Canister Serial

#: 1SC 8573 / 003921 / 83281
UPC LABEL ← CAS

Flow Regulator Serial

#: 0A 0519 / IV-25**Environmental Conditions**Outdoor Temperature: 28°F Barometric Pressure: 29.861 Relative Humidity: 63%Wind Speed/Direction: SSE 3 Comments: _____**Preliminary Screening**Instrumentation: PID Calibration Date: 3/3/08 Time: 1702 am/pmField Reading(s): 0.2 (ppm)/ _____ (ppm)/ _____ (ppm)/ _____ (ppm)Location(s): NW CORNER OPEN AREA**Mechanical Leak Test**

Time	Pressure
Start: <u>1932</u> am/pm	<u>29</u> "Hg
Stop: <u>1942</u> am/pm	<u>29</u> "Hg

Chemical Leak Test

Leak Test Compound: HELIUM
Shroud Reading: 48.5 (ppm%) x 0.1 =
Allowable Concentration 4.8 (ppm%)
Tedlar bag reading 1375 (ppm%)

Air Sampling

Time	Pressure	Controller Flow
Start: <u>1942</u> am/pm	<u>29</u> "Hg	<u>15 mL / 12</u>
Stop: <u>1957</u> am/pm	<u>4</u> "Hg	_____
Start: _____ am/pm	_____ "Hg	_____
Stop: _____ am/pm	_____ "Hg	_____

BUILDING QUESTIONNAIRE

Building Type: Residential Commercial Multi-Use

Owner/Tenant: SUNSHINE LAUNDRY

Address: 2422 S 5TH AVE SOUTH

Describe Building Uses: LAUNDRY MAT (COIN OPERATED); DELI; TANNING

Smoker(s): Y/N Product (Cigars, Pipe, Cigarettes): VARIOUS Number Smoked/Day: ?

Basement/Crawl Space: Y/N Ventilated: NA Living Quarters: NA

Basement

Activities: NA

Private Well: NA Sump: NA Cistern: NA In Use/Plugged: NA

Recent Remodeling: Y/N Activities (painting, new carpet, new cabinets): Y/N
NA

VOC sources (hobbies, paints, solvents, gasoline, etc): COMMERCIAL CLEANERS (SEE ATTACHED LIST)

Cleaning Products and

Storage: RANDOM STORAGE / NO PLACEMENT THROUGHOUT

Attached Garage: Y/N Garage Storage (cars, lawn mower, etc): _____

Furnace Type (Oil, Natural Gas, Propane): _____ Furnace Intake: Inside/Outside

Additional Heating Sources (space heater, etc): _____ Fuel Type: _____

Comments: _____

BUILDING QUESTIONNAIRE (cont.)

CHEMICAL INVENTORY

[illegible]



QC Certification

Columbia Analytical Services, Inc.
2655 Park Center Drive, Suite A
Simi Valley, CA 93065
Ph. 805-526-7161
Fax 805-526-7270

<u>Container IDs</u>	<u>Cleaned Date</u>	<u>Date Analyzed</u>	<u>QC Results</u>	<u>Comments</u>
1SC00460	02/14/2008	02/27/2008	Pass	ALL COMPOUNDS
1SC00573	02/14/2008	02/27/2008	Pass	ALL COMPOUNDS
OA00005	07/20/2007	07/24/2007		

ATTACHMENT D
Tables

Table 1
Soil Sample Analytical Results
Phase II Investigation
Nestle-Purina Petcare Company
Fort Dodge, Iowa

	USEPA Region VI Screening Level	Iowa Statewide Screening Level	USEPA Region VI Screening Level	Sample Number	DP-1/SB01	DP-2/SB02	DP-3/SB03	DP-4/SB01
Parameter	Residential Soil	Soil	Groundwater Protection	Sample Date Sample Interval	3/4/2008 3 to 4	3/4/2008 6 to 7	3/4/2008 12 to 13	3/4/2008 2 to 3
Volatile Organic Compounds (VOCs)				Units				
1,2-Dichloroethene (Total)	43	760	0.02	mg/kg	0.0063 U	0.0061 U	0.0058 U	0.0067 U
cis-1,2-Dichloroethene	43	760	0.02	mg/kg	0.0063 U	0.0061 U	0.0058 U	0.0067 U
Tetrachloroethene	0.55	5.7	0.003	mg/kg	0.0184	0.0061 U	0.0058 U	1.85
Trichloroethene	0.043	7.7	0.003	mg/kg	0.0063 U	0.0061 U	0.0058 U	0.0067 U

Note

NA = Not Available

U = not detected above detection limit shown

All results in milligrams per kilogram (mg/kg).

Bold type indicates positive detection.

Shading indicates exceedence of screening level.

Table 1
Soil Sample Analytical Results
Phase II Investigation
Nestle-Purina Petcare Company
Fort Dodge, Iowa

	USEPA Region VI Screening Level	Iowa Statewide Screening Level	USEPA Region VI Screening Level	Sample Number	DP-5/SB01	DP-6/SB02	DP-7/SB03	DP-8/SB02
Parameter	Residential Soil	Soil	Groundwater Protection	Sample Date Sample Interval	3/4/2008 1 to 2	3/4/2008 5 to 6	3/4/2008 14 to 15	3/4/2008 6 to 7
Volatile Organic Compounds (VOCs)				Units				
1,2-Dichloroethene (Total)	43	760	0.02	mg/kg	0.0057 U	0.0060 U	0.0058 U	0.0194
cis-1,2-Dichloroethene	43	760	0.02	mg/kg	0.0057 U	0.0060 U	0.0058 U	0.0148
Tetrachloroethene	0.55	5.7	0.003	mg/kg	0.0167	0.291	0.0058 U	0.262
Trichloroethene	0.043	7.7	0.003	mg/kg	0.0057 U	0.0060 U	0.0058 U	0.0105

Note

NA = Not Available

U = not detected above detection limit shown

All results in milligrams per kilogram (mg/kg).

Bold type indicates positive detection.

Shading indicates exceedence of screening level.

Table 1
Soil Sample Analytical Results
Phase II Investigation
Nestle-Purina Petcare Company
Fort Dodge, Iowa

	USEPA Region VI Screening Level	Iowa Statewide Screening Level	USEPA Region VI Screening Level	Sample Number	DP-9/SB03	DP-10/SB03
Parameter	Residential Soil	Soil	Groundwater Protection	Sample Date Sample Interval	3/4/2008 14 to 15	3/4/2008 14 to 15
Volatile Organic Compounds (VOCs)				Units		
1,2-Dichloroethene (Total)	43	760	0.02	mg/kg	0.0059 U	0.0061 U
cis-1,2-Dichloroethene	43	760	0.02	mg/kg	0.0059 U	0.0061 U
Tetrachloroethene	0.55	5.7	0.003	mg/kg	22.1	0.0061 U
Trichloroethene	0.043	7.7	0.003	mg/kg	0.052	0.0061 U

Note

NA = Not Available

U = not detected above detection limit shown

All results in milligrams per kilogram (mg/kg).

Bold type indicates positive detection.

Shading indicates exceedence of screening level.

Table 2
Groundwater Sample Analytical Results
Phase II Investigation
Nestle-Purina Petcare Company
Fort Dodge, Iowa

Parameter	Maximum Contaminant Levels (MCLs)	Sample Number Sample Date	DP-1/GW01 3/4/2008	DP-2/GW01 3/4/2008	DP-3/GW01 3/4/2008	DP-4/GW01 3/4/2008	DP-5/GW01 3/4/2008
Volatile Organic Compounds (VOCs)		Units					
Chloroethane	NA	mg/L	0.005 U	0.005 U	0.001 U	0.005 U	0.005 U
1,2-Dichloroethene (Total)	0.07	mg/L	0.005 U	0.005 U	0.001 U	0.0264	0.005 U
cis-1,2-Dichloroethene	0.07	mg/L	0.005 U	0.005 U	0.001 U	0.0243	0.005 U
trans-1,2-Dichloroethene	0.1	mg/L	0.005 U	0.005 U	0.001 U	0.0021 J	0.005 U
Tetrachloroethene	0.005	mg/L	0.012	0.034	0.0664	0.190	0.248
Trichloroethene	0.005	mg/L	0.005 U	0.005 U	0.001 U	0.005 U	0.005 U
1,2,4-Trimethylbenzene	NA	mg/L	0.005 U	0.005 U	0.001 U	0.005 U	0.005 U
Vinyl Chloride	0.002	mg/L	0.005 U	0.005 U	0.001 U	0.005 U	0.005 U

Note

J = estimated concentration

NA = Not Available

U = not detected above detection limit shown

All results in milligrams per liter (mg/L).

Bold type indicates positive detection.

Shading indicates exceedence of screening level.

Table 2
Groundwater Sample Analytical Results
Phase II Investigation
Nestle-Purina Petcare Company
Fort Dodge, Iowa

Parameter	Maximum Contaminant Levels (MCLs)	Sample Number Sample Date	DP-6/GW01 3/4/2008	DP-7/GW01 3/4/2008	DP-8/GW01 3/4/2008	DP-9/GW01 3/4/2008	DP-10/GW01 3/4/2008
Volatile Organic Compounds (VOCs)		Units					
Chloroethane	NA	mg/L	0.005 U	0.005 U	0.0014	0.001 U	0.001 U
1,2-Dichloroethene (Total)	0.07	mg/L	0.007	0.005 U	0.440	0.0083	0.001 U
cis-1,2-Dichloroethene	0.07	mg/L	0.007	0.005 U	0.302	0.0058	0.001 U
trans-1,2-Dichloroethene	0.1	mg/L	0.005 U	0.005 U	0.139	0.0026	0.001 U
Tetrachloroethene	0.005	mg/L	1.040	0.511	0.178	2.130	0.001 U
Trichloroethene	0.005	mg/L	0.0379	0.005 U	0.103	0.0042	0.001 U
1,2,4-Trimethylbenzene	NA	mg/L	0.005 U	0.005 U	0.001 U	0.0012	0.001 U
Vinyl Chloride	0.002	mg/L	0.005 U	0.005 U	0.0023	0.001 U	0.001 U

Note

J = estimated concentration

NA = Not Available

U = not detected above detection limit shown

All results in milligrams per liter (mg/L).

Bold type indicates positive detection.

Shading indicates exceedence of screening level.

Table 3
Sub-Slab Vapor Sample Analytical Results
Phase II Investigation
Nestle-Purina Petcare Company
Fort Dodge, Iowa

Parameter	Sub-Slab Screening Level ¹	Sample Number Sample Date Canister ID	SVP-1/AR01 3/4/2008 1SC00460	SVP-2/AR01 3/4/2008 1SC00573
Volatile Organic Compounds (VOCs)		Units		
Tetrachloroethene	67	µg/m ³	170	630,000
m,p-Xylenes	195	µg/m ³	4.9	7,800 U

Note

1 = Sub-slab screening levels were derived as described on page 5.

U = not detected above detection limit shown

µg/m³ = micrograms per cubic meter

Bold type indicates positive detection.

Shading indicates exceedence of screening level.

ATTACHMENT E
Laboratory Analytical Report – Soil and Groundwater



Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

March 12, 2008

Mr. Greg Gorman
Burns & McDonnell Waste Consultants
9400 Ward Parkway
Kansas City, MO 64114

RE: Project: NPPC FT DODGE
Pace Project No.: 6036442

Dear Mr. Gorman:

Enclosed are the analytical results for sample(s) received by the laboratory on March 05, 2008. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Angie Brown

Angie.Brown@pacelabs.com
Project Manager

A2LA Certification Number: 2456.01
Arkansas Certification Number: 05-008-0
Illinois Certification Number: 001191
Iowa Certification Number: 118
Kansas/NELAP Certification Number: E-10116
Louisiana Certification Number: 03055
Oklahoma Certification Number: 9205/9935
Utah Certification Number: 9135995665

Enclosures

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: NPPC FT DODGE
Pace Project No.: 6036442

Lab ID	Sample ID	Matrix	Date Collected	Date Received
6036442001	TB030408/GW	Water	03/04/08 07:00	03/05/08 17:02
6036442002	TB030408/SOIL	Solid	03/04/08 07:00	03/05/08 17:02
6036442003	DP-10/SB03	Solid	03/04/08 07:19	03/05/08 17:02
6036442004	DP-10/GW01	Water	03/04/08 08:30	03/05/08 17:02
6036442005	DP-9/SB03	Solid	03/04/08 09:03	03/05/08 17:02
6036442006	DP-9/GW01	Water	03/04/08 09:21	03/05/08 17:02
6036442007	DUP-1/GW01	Water	03/04/08 00:00	03/05/08 17:02
6036442008	DP-4/SB01	Solid	03/04/08 09:42	03/05/08 17:02
6036442009	DP-4/GW01	Water	03/04/08 10:03	03/05/08 17:02
6036442010	DP-2/SB02	Solid	03/04/08 10:37	03/05/08 17:02
6036442011	DP-2/GW01	Water	03/04/08 10:55	03/05/08 17:02
6036442012	DP-3/SB03	Solid	03/04/08 11:49	03/05/08 17:02
6036442013	DP-3/GW01	Water	03/04/08 12:04	03/05/08 17:02
6036442014	DP-1/SB01	Solid	03/04/08 12:32	03/05/08 17:02
6036442015	DP-1/GW01	Water	03/04/08 13:00	03/05/08 17:02
6036442016	DP-8/SB02	Solid	03/04/08 13:35	03/05/08 17:02
6036442017	DUP-1/SB02	Solid	03/04/08 00:00	03/05/08 17:02
6036442018	DP-8/GW01	Water	03/04/08 13:53	03/05/08 17:02
6036442019	DP-6/SB02	Solid	03/04/08 14:13	03/05/08 17:02
6036442020	DP-6/GW01	Water	03/04/08 14:30	03/05/08 17:02
6036442021	DP-5/SB01	Solid	03/04/08 14:42	03/05/08 17:02
6036442022	DP-5/GW01	Water	03/04/08 14:55	03/05/08 17:02
6036442023	DP-7/SB03	Solid	03/04/08 15:13	03/05/08 17:02
6036442024	DP-7/GW01	Water	03/04/08 15:24	03/05/08 17:02

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: NPPC FT DODGE
Pace Project No.: 6036442

Lab ID	Sample ID	Method	Analysts	Analytes Reported
6036442001	TB030408/GW	EPA 5030B/8260	AJA	70
6036442002	TB030408/SOIL	ASTM D2974-87	ZNF	1
		EPA 8260	SSM	69
6036442003	DP-10/SB03	ASTM D2974-87	ZNF	1
		EPA 8260	SSM	69
6036442004	DP-10/GW01	EPA 5030B/8260	AJA	70
6036442005	DP-9/SB03	ASTM D2974-87	ZNF	1
		EPA 8260	SSM	69
6036442006	DP-9/GW01	EPA 5030B/8260	AJA	70
6036442007	DUP-1/GW01	EPA 5030B/8260	AJA	70
6036442008	DP-4/SB01	ASTM D2974-87	TM	1
		EPA 8260	SSM	69
6036442009	DP-4/GW01	EPA 5030B/8260	AJA	70
6036442010	DP-2/SB02	ASTM D2974-87	TM	1
		EPA 8260	SSM	69
6036442011	DP-2/GW01	EPA 5030B/8260	AJA	70
6036442012	DP-3/SB03	ASTM D2974-87	TM	1
		EPA 8260	SSM	69
6036442013	DP-3/GW01	EPA 5030B/8260	AJA	70
6036442014	DP-1/SB01	ASTM D2974-87	TM	1
		EPA 8260	SSM	69
6036442015	DP-1/GW01	EPA 5030B/8260	AJA	70
6036442016	DP-8/SB02	ASTM D2974-87	TM	1
		EPA 8260	SSM	69
6036442017	DUP-1/SB02	ASTM D2974-87	TM	1
		EPA 8260	SSM	69
6036442018	DP-8/GW01	EPA 5030B/8260	AJA	70
6036442019	DP-6/SB02	ASTM D2974-87	TM	1
		EPA 8260	SSM	69
6036442020	DP-6/GW01	EPA 5030B/8260	AJA	70
6036442021	DP-5/SB01	ASTM D2974-87	TM	1
		EPA 8260	SSM	69
6036442022	DP-5/GW01	EPA 5030B/8260	AJA	70
6036442023	DP-7/SB03	ASTM D2974-87	TM	1
		EPA 8260	SSM	69
6036442024	DP-7/GW01	EPA 5030B/8260	AJA	70

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: TB030408/GW		Lab ID: 6036442001		Collected: 03/04/08 07:00		Received: 03/05/08 17:02		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV		Analytical Method: EPA 5030B/8260							
Acetone	ND	ug/L	10.0	1		03/07/08 16:15	67-64-1		
Benzene	ND	ug/L	1.0	1		03/07/08 16:15	71-43-2		
Bromobenzene	ND	ug/L	1.0	1		03/07/08 16:15	108-86-1		
Bromochloromethane	ND	ug/L	1.0	1		03/07/08 16:15	74-97-5		
Bromodichloromethane	ND	ug/L	1.0	1		03/07/08 16:15	75-27-4		
Bromoform	ND	ug/L	1.0	1		03/07/08 16:15	75-25-2		
Bromomethane	ND	ug/L	1.0	1		03/07/08 16:15	74-83-9		
2-Butanone (MEK)	ND	ug/L	10.0	1		03/07/08 16:15	78-93-3		
n-Butylbenzene	ND	ug/L	1.0	1		03/07/08 16:15	104-51-8		
sec-Butylbenzene	ND	ug/L	1.0	1		03/07/08 16:15	135-98-8		
tert-Butylbenzene	ND	ug/L	1.0	1		03/07/08 16:15	98-06-6		
Carbon disulfide	ND	ug/L	5.0	1		03/07/08 16:15	75-15-0		
Carbon tetrachloride	ND	ug/L	1.0	1		03/07/08 16:15	56-23-5		
Chlorobenzene	ND	ug/L	1.0	1		03/07/08 16:15	108-90-7		
Chloroethane	ND	ug/L	1.0	1		03/07/08 16:15	75-00-3		
Chloroform	ND	ug/L	1.0	1		03/07/08 16:15	67-66-3		
Chloromethane	ND	ug/L	1.0	1		03/07/08 16:15	74-87-3		
2-Chlorotoluene	ND	ug/L	1.0	1		03/07/08 16:15	95-49-8		
4-Chlorotoluene	ND	ug/L	1.0	1		03/07/08 16:15	106-43-4		
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		03/07/08 16:15	96-12-8		
Dibromochloromethane	ND	ug/L	1.0	1		03/07/08 16:15	124-48-1		
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/07/08 16:15	106-93-4		
Dibromomethane	ND	ug/L	1.0	1		03/07/08 16:15	74-95-3		
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 16:15	95-50-1		
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 16:15	541-73-1		
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 16:15	106-46-7		
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/07/08 16:15	75-71-8		
1,1-Dichloroethane	ND	ug/L	1.0	1		03/07/08 16:15	75-34-3		
1,2-Dichloroethane	ND	ug/L	1.0	1		03/07/08 16:15	107-06-2		
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		03/07/08 16:15	540-59-0		
1,1-Dichloroethene	ND	ug/L	1.0	1		03/07/08 16:15	75-35-4		
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/07/08 16:15	156-59-2		
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/07/08 16:15	156-60-5		
1,2-Dichloropropane	ND	ug/L	1.0	1		03/07/08 16:15	78-87-5		
1,3-Dichloropropane	ND	ug/L	1.0	1		03/07/08 16:15	142-28-9		
2,2-Dichloropropane	ND	ug/L	1.0	1		03/07/08 16:15	594-20-7		
1,1-Dichloropropene	ND	ug/L	1.0	1		03/07/08 16:15	563-58-6		
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/07/08 16:15	10061-01-5		
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/07/08 16:15	10061-02-6		
Ethylbenzene	ND	ug/L	1.0	1		03/07/08 16:15	100-41-4		
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/07/08 16:15	87-68-3		
2-Hexanone	ND	ug/L	10.0	1		03/07/08 16:15	591-78-6		
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		03/07/08 16:15	98-82-8		
p-Isopropyltoluene	ND	ug/L	1.0	1		03/07/08 16:15	99-87-6		
Methylene chloride	ND	ug/L	1.0	1		03/07/08 16:15	75-09-2		
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/07/08 16:15	108-10-1		
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/07/08 16:15	1634-04-4		

Date: 03/12/2008 04:58 PM

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: NPPC FT DODGE
Pace Project No.: 6036442

Sample: TB030408/GW		Lab ID: 6036442001	Collected: 03/04/08 07:00	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Naphthalene	ND	ug/L	10.0	1		03/07/08 16:15	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		03/07/08 16:15	103-65-1	
Styrene	ND	ug/L	1.0	1		03/07/08 16:15	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/07/08 16:15	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/07/08 16:15	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		03/07/08 16:15	127-18-4	
Toluene	ND	ug/L	1.0	1		03/07/08 16:15	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/07/08 16:15	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/07/08 16:15	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/07/08 16:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/07/08 16:15	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		03/07/08 16:15	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		03/07/08 16:15	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		03/07/08 16:15	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		03/07/08 16:15	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		03/07/08 16:15	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		03/07/08 16:15	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		03/07/08 16:15	1330-20-7	
4-Bromofluorobenzene (S)	101	%	85-119	1		03/07/08 16:15	460-00-4	
Dibromofluoromethane (S)	101	%	85-114	1		03/07/08 16:15	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	81-118	1		03/07/08 16:15	17060-07-0	
Toluene-d8 (S)	100	%	82-114	1		03/07/08 16:15	2037-26-5	
Preservation pH	1.0		0.10	1		03/07/08 16:15		

ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: TB030408/SOIL Lab ID: 6036442002 Collected: 03/04/08 07:00 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	20.0	1		03/11/08 20:06	67-64-1	
Benzene	ND	ug/kg	5.0	1		03/11/08 20:06	71-43-2	
Bromobenzene	ND	ug/kg	5.0	1		03/11/08 20:06	108-86-1	
Bromochloromethane	ND	ug/kg	5.0	1		03/11/08 20:06	74-97-5	
Bromodichloromethane	ND	ug/kg	5.0	1		03/11/08 20:06	75-27-4	
Bromoform	ND	ug/kg	5.0	1		03/11/08 20:06	75-25-2	
Bromomethane	ND	ug/kg	5.0	1		03/11/08 20:06	74-83-9	
2-Butanone (MEK)	ND	ug/kg	10.0	1		03/11/08 20:06	78-93-3	
n-Butylbenzene	ND	ug/kg	5.0	1		03/11/08 20:06	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.0	1		03/11/08 20:06	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.0	1		03/11/08 20:06	98-06-6	
Carbon disulfide	ND	ug/kg	5.0	1		03/11/08 20:06	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.0	1		03/11/08 20:06	56-23-5	
Chlorobenzene	ND	ug/kg	5.0	1		03/11/08 20:06	108-90-7	
Chloroethane	ND	ug/kg	5.0	1		03/11/08 20:06	75-00-3	
Chloroform	ND	ug/kg	5.0	1		03/11/08 20:06	67-66-3	
Chloromethane	ND	ug/kg	5.0	1		03/11/08 20:06	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.0	1		03/11/08 20:06	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.0	1		03/11/08 20:06	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	10.0	1		03/11/08 20:06	96-12-8	
Dibromochloromethane	ND	ug/kg	5.0	1		03/11/08 20:06	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.0	1		03/11/08 20:06	106-93-4	
Dibromomethane	ND	ug/kg	5.0	1		03/11/08 20:06	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.0	1		03/11/08 20:06	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.0	1		03/11/08 20:06	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.0	1		03/11/08 20:06	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	5.0	1		03/11/08 20:06	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.0	1		03/11/08 20:06	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.0	1		03/11/08 20:06	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.0	1		03/11/08 20:06	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.0	1		03/11/08 20:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.0	1		03/11/08 20:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.0	1		03/11/08 20:06	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.0	1		03/11/08 20:06	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.0	1		03/11/08 20:06	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.0	1		03/11/08 20:06	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.0	1		03/11/08 20:06	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.0	1		03/11/08 20:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.0	1		03/11/08 20:06	10061-02-6	
Ethylbenzene	ND	ug/kg	5.0	1		03/11/08 20:06	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.0	1		03/11/08 20:06	87-68-3	
2-Hexanone	ND	ug/kg	20.0	1		03/11/08 20:06	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.0	1		03/11/08 20:06	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.0	1		03/11/08 20:06	99-87-6	
Methylene chloride	ND	ug/kg	5.0	1		03/11/08 20:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	10.0	1		03/11/08 20:06	108-10-1	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE
Pace Project No.: 6036442

Sample: TB030408/SOIL Lab ID: 6036442002 Collected: 03/04/08 07:00 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA								
Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	5.0	1		03/11/08 20:06	1634-04-4	
Naphthalene	ND	ug/kg	10.0	1		03/11/08 20:06	91-20-3	
n-Propylbenzene	ND	ug/kg	5.0	1		03/11/08 20:06	103-65-1	
Styrene	ND	ug/kg	5.0	1		03/11/08 20:06	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.0	1		03/11/08 20:06	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.0	1		03/11/08 20:06	79-34-5	
Tetrachloroethene	ND	ug/kg	5.0	1		03/11/08 20:06	127-18-4	
Toluene	ND	ug/kg	5.0	1		03/11/08 20:06	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.0	1		03/11/08 20:06	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.0	1		03/11/08 20:06	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.0	1		03/11/08 20:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.0	1		03/11/08 20:06	79-00-5	
Trichloroethene	ND	ug/kg	5.0	1		03/11/08 20:06	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.0	1		03/11/08 20:06	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.0	1		03/11/08 20:06	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.0	1		03/11/08 20:06	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.0	1		03/11/08 20:06	108-67-8	
Vinyl chloride	ND	ug/kg	5.0	1		03/11/08 20:06	75-01-4	
Xylene (Total)	ND	ug/kg	5.0	1		03/11/08 20:06	1330-20-7	
Dibromofluoromethane (S)	103	%	82-119	1		03/11/08 20:06	1868-53-7	
Toluene-d8 (S)	102	%	76-120	1		03/11/08 20:06	2037-26-5	
4-Bromofluorobenzene (S)	100	%	71-124	1		03/11/08 20:06	460-00-4	
1,2-Dichloroethane-d4 (S)	98	%	82-125	1		03/11/08 20:06	17060-07-0	
Percent Moisture								
Analytical Method: ASTM D2974-87								
Percent Moisture	ND	%	0.10	1		03/07/08 00:00		

ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-10/SB03 Lab ID: 6036442003 Collected: 03/04/08 07:19 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	24.3	1		03/11/08 20:23	67-64-1	
Benzene	ND	ug/kg	6.1	1		03/11/08 20:23	71-43-2	
Bromobenzene	ND	ug/kg	6.1	1		03/11/08 20:23	108-86-1	
Bromochloromethane	ND	ug/kg	6.1	1		03/11/08 20:23	74-97-5	
Bromodichloromethane	ND	ug/kg	6.1	1		03/11/08 20:23	75-27-4	
Bromoform	ND	ug/kg	6.1	1		03/11/08 20:23	75-25-2	
Bromomethane	ND	ug/kg	6.1	1		03/11/08 20:23	74-83-9	
2-Butanone (MEK)	ND	ug/kg	12.1	1		03/11/08 20:23	78-93-3	
n-Butylbenzene	ND	ug/kg	6.1	1		03/11/08 20:23	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.1	1		03/11/08 20:23	135-98-8	
tert-Butylbenzene	ND	ug/kg	6.1	1		03/11/08 20:23	98-06-6	
Carbon disulfide	ND	ug/kg	6.1	1		03/11/08 20:23	75-15-0	
Carbon tetrachloride	ND	ug/kg	6.1	1		03/11/08 20:23	56-23-5	
Chlorobenzene	ND	ug/kg	6.1	1		03/11/08 20:23	108-90-7	
Chloroethane	ND	ug/kg	6.1	1		03/11/08 20:23	75-00-3	
Chloroform	ND	ug/kg	6.1	1		03/11/08 20:23	67-66-3	
Chloromethane	ND	ug/kg	6.1	1		03/11/08 20:23	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.1	1		03/11/08 20:23	95-49-8	
4-Chlorotoluene	ND	ug/kg	6.1	1		03/11/08 20:23	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	12.1	1		03/11/08 20:23	96-12-8	
Dibromochloromethane	ND	ug/kg	6.1	1		03/11/08 20:23	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.1	1		03/11/08 20:23	106-93-4	
Dibromomethane	ND	ug/kg	6.1	1		03/11/08 20:23	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.1	1		03/11/08 20:23	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.1	1		03/11/08 20:23	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.1	1		03/11/08 20:23	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	6.1	1		03/11/08 20:23	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.1	1		03/11/08 20:23	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.1	1		03/11/08 20:23	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	6.1	1		03/11/08 20:23	540-59-0	
1,1-Dichloroethene	ND	ug/kg	6.1	1		03/11/08 20:23	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.1	1		03/11/08 20:23	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.1	1		03/11/08 20:23	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.1	1		03/11/08 20:23	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.1	1		03/11/08 20:23	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.1	1		03/11/08 20:23	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.1	1		03/11/08 20:23	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.1	1		03/11/08 20:23	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.1	1		03/11/08 20:23	10061-02-6	
Ethylbenzene	ND	ug/kg	6.1	1		03/11/08 20:23	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	6.1	1		03/11/08 20:23	87-68-3	
2-Hexanone	ND	ug/kg	24.3	1		03/11/08 20:23	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.1	1		03/11/08 20:23	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.1	1		03/11/08 20:23	99-87-6	
Methylene chloride	ND	ug/kg	6.1	1		03/11/08 20:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	12.1	1		03/11/08 20:23	108-10-1	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-10/SB03 Lab ID: 6036442003 Collected: 03/04/08 07:19 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA								
Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	6.1	1		03/11/08 20:23	1634-04-4	
Naphthalene	ND	ug/kg	12.1	1		03/11/08 20:23	91-20-3	
n-Propylbenzene	ND	ug/kg	6.1	1		03/11/08 20:23	103-65-1	
Styrene	ND	ug/kg	6.1	1		03/11/08 20:23	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.1	1		03/11/08 20:23	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.1	1		03/11/08 20:23	79-34-5	
Tetrachloroethene	ND	ug/kg	6.1	1		03/11/08 20:23	127-18-4	
Toluene	ND	ug/kg	6.1	1		03/11/08 20:23	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.1	1		03/11/08 20:23	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.1	1		03/11/08 20:23	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.1	1		03/11/08 20:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.1	1		03/11/08 20:23	79-00-5	
Trichloroethene	ND	ug/kg	6.1	1		03/11/08 20:23	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.1	1		03/11/08 20:23	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.1	1		03/11/08 20:23	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	6.1	1		03/11/08 20:23	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.1	1		03/11/08 20:23	108-67-8	
Vinyl chloride	ND	ug/kg	6.1	1		03/11/08 20:23	75-01-4	
Xylene (Total)	ND	ug/kg	6.1	1		03/11/08 20:23	1330-20-7	
Dibromofluoromethane (S)	98 %		82-119	1		03/11/08 20:23	1868-53-7	
Toluene-d8 (S)	97 %		76-120	1		03/11/08 20:23	2037-26-5	
4-Bromofluorobenzene (S)	97 %		71-124	1		03/11/08 20:23	460-00-4	
1,2-Dichloroethane-d4 (S)	107 %		82-125	1		03/11/08 20:23	17060-07-0	
Percent Moisture								
Analytical Method: ASTM D2974-87								
Percent Moisture	18.5 %		0.10	1		03/07/08 00:00		

ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-10/GW01 Lab ID: 6036442004 Collected: 03/04/08 08:30 Received: 03/05/08 17:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Acetone	ND	ug/L	10.0	1		03/07/08 16:31	67-64-1	
Benzene	ND	ug/L	1.0	1		03/07/08 16:31	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/07/08 16:31	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/07/08 16:31	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/07/08 16:31	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/07/08 16:31	75-25-2	
Bromomethane	ND	ug/L	1.0	1		03/07/08 16:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/07/08 16:31	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		03/07/08 16:31	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		03/07/08 16:31	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		03/07/08 16:31	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		03/07/08 16:31	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		03/07/08 16:31	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/07/08 16:31	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/07/08 16:31	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/07/08 16:31	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/07/08 16:31	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/07/08 16:31	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/07/08 16:31	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		03/07/08 16:31	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/07/08 16:31	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/07/08 16:31	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/07/08 16:31	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 16:31	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 16:31	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 16:31	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/07/08 16:31	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/07/08 16:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/07/08 16:31	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		03/07/08 16:31	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/07/08 16:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/07/08 16:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/07/08 16:31	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/07/08 16:31	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/07/08 16:31	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/07/08 16:31	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/07/08 16:31	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/07/08 16:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/07/08 16:31	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		03/07/08 16:31	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/07/08 16:31	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		03/07/08 16:31	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		03/07/08 16:31	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/07/08 16:31	99-87-6	
Methylene chloride	ND	ug/L	1.0	1		03/07/08 16:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/07/08 16:31	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/07/08 16:31	1634-04-4	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE
Pace Project No.: 6036442

Sample: DP-10/GW01		Lab ID: 6036442004	Collected: 03/04/08 08:30	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Naphthalene	ND	ug/L	10.0	1		03/07/08 16:31	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		03/07/08 16:31	103-65-1	
Styrene	ND	ug/L	1.0	1		03/07/08 16:31	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/07/08 16:31	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/07/08 16:31	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		03/07/08 16:31	127-18-4	
Toluene	ND	ug/L	1.0	1		03/07/08 16:31	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/07/08 16:31	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/07/08 16:31	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/07/08 16:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/07/08 16:31	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		03/07/08 16:31	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		03/07/08 16:31	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		03/07/08 16:31	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		03/07/08 16:31	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		03/07/08 16:31	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		03/07/08 16:31	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		03/07/08 16:31	1330-20-7	
4-Bromofluorobenzene (S)	100	%	85-119	1		03/07/08 16:31	460-00-4	
Dibromofluoromethane (S)	102	%	85-114	1		03/07/08 16:31	1868-53-7	
1,2-Dichloroethane-d4 (S)	97	%	81-118	1		03/07/08 16:31	17060-07-0	
Toluene-d8 (S)	100	%	82-114	1		03/07/08 16:31	2037-26-5	
Preservation pH	1.0		0.10	1		03/07/08 16:31		

ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-9/SB03 Lab ID: 6036442005 Collected: 03/04/08 09:03 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	23.6	1		03/11/08 20:39	67-64-1	
Benzene	ND	ug/kg	5.9	1		03/11/08 20:39	71-43-2	
Bromobenzene	ND	ug/kg	5.9	1		03/11/08 20:39	108-86-1	
Bromochloromethane	ND	ug/kg	5.9	1		03/11/08 20:39	74-97-5	
Bromodichloromethane	ND	ug/kg	5.9	1		03/11/08 20:39	75-27-4	
Bromoform	ND	ug/kg	5.9	1		03/11/08 20:39	75-25-2	
Bromomethane	ND	ug/kg	5.9	1		03/11/08 20:39	74-83-9	
2-Butanone (MEK)	ND	ug/kg	11.8	1		03/11/08 20:39	78-93-3	
n-Butylbenzene	ND	ug/kg	5.9	1		03/11/08 20:39	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.9	1		03/11/08 20:39	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.9	1		03/11/08 20:39	98-06-6	
Carbon disulfide	ND	ug/kg	5.9	1		03/11/08 20:39	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.9	1		03/11/08 20:39	56-23-5	
Chlorobenzene	ND	ug/kg	5.9	1		03/11/08 20:39	108-90-7	
Chloroethane	ND	ug/kg	5.9	1		03/11/08 20:39	75-00-3	
Chloroform	ND	ug/kg	5.9	1		03/11/08 20:39	67-66-3	
Chloromethane	ND	ug/kg	5.9	1		03/11/08 20:39	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.9	1		03/11/08 20:39	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.9	1		03/11/08 20:39	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	11.8	1		03/11/08 20:39	96-12-8	
Dibromochloromethane	ND	ug/kg	5.9	1		03/11/08 20:39	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.9	1		03/11/08 20:39	106-93-4	
Dibromomethane	ND	ug/kg	5.9	1		03/11/08 20:39	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.9	1		03/11/08 20:39	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.9	1		03/11/08 20:39	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.9	1		03/11/08 20:39	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	5.9	1		03/11/08 20:39	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.9	1		03/11/08 20:39	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.9	1		03/11/08 20:39	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.9	1		03/11/08 20:39	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.9	1		03/11/08 20:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.9	1		03/11/08 20:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.9	1		03/11/08 20:39	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.9	1		03/11/08 20:39	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.9	1		03/11/08 20:39	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.9	1		03/11/08 20:39	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.9	1		03/11/08 20:39	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.9	1		03/11/08 20:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.9	1		03/11/08 20:39	10061-02-6	
Ethylbenzene	ND	ug/kg	5.9	1		03/11/08 20:39	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.9	1		03/11/08 20:39	87-68-3	
2-Hexanone	ND	ug/kg	23.6	1		03/11/08 20:39	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.9	1		03/11/08 20:39	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.9	1		03/11/08 20:39	99-87-6	
Methylene chloride	ND	ug/kg	5.9	1		03/11/08 20:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	11.8	1		03/11/08 20:39	108-10-1	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE
Pace Project No.: 6036442

Sample: DP-9/SB03 Lab ID: 6036442005 Collected: 03/04/08 09:03 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	5.9	1		03/11/08 20:39	1634-04-4	
Naphthalene	ND	ug/kg	11.8	1		03/11/08 20:39	91-20-3	
n-Propylbenzene	ND	ug/kg	5.9	1		03/11/08 20:39	103-65-1	
Styrene	ND	ug/kg	5.9	1		03/11/08 20:39	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.9	1		03/11/08 20:39	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.9	1		03/11/08 20:39	79-34-5	
Tetrachloroethene	22100	ug/kg	1490	250		03/12/08 13:58	127-18-4	
Toluene	ND	ug/kg	5.9	1		03/11/08 20:39	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.9	1		03/11/08 20:39	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.9	1		03/11/08 20:39	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.9	1		03/11/08 20:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.9	1		03/11/08 20:39	79-00-5	
Trichloroethene	52.0	ug/kg	5.9	1		03/11/08 20:39	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.9	1		03/11/08 20:39	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.9	1		03/11/08 20:39	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.9	1		03/11/08 20:39	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.9	1		03/11/08 20:39	108-67-8	
Vinyl chloride	ND	ug/kg	5.9	1		03/11/08 20:39	75-01-4	
Xylene (Total)	ND	ug/kg	5.9	1		03/11/08 20:39	1330-20-7	
Dibromofluoromethane (S)	102 %		82-119	1		03/11/08 20:39	1868-53-7	
Toluene-d8 (S)	99 %		76-120	1		03/11/08 20:39	2037-26-5	
4-Bromofluorobenzene (S)	93 %		71-124	1		03/11/08 20:39	460-00-4	
1,2-Dichloroethane-d4 (S)	98 %		82-125	1		03/11/08 20:39	17060-07-0	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	15.0 %		0.10	1		03/07/08 00:00		

ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-9/GW01		Lab ID: 6036442006	Collected: 03/04/08 09:21	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Acetone	ND	ug/L	10.0	1		03/07/08 16:48	67-64-1	
Benzene	ND	ug/L	1.0	1		03/07/08 16:48	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/07/08 16:48	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/07/08 16:48	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/07/08 16:48	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/07/08 16:48	75-25-2	
Bromomethane	ND	ug/L	1.0	1		03/07/08 16:48	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/07/08 16:48	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		03/07/08 16:48	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		03/07/08 16:48	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		03/07/08 16:48	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		03/07/08 16:48	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		03/07/08 16:48	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/07/08 16:48	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/07/08 16:48	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/07/08 16:48	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/07/08 16:48	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/07/08 16:48	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/07/08 16:48	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		03/07/08 16:48	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/07/08 16:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/07/08 16:48	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/07/08 16:48	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 16:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 16:48	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 16:48	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/07/08 16:48	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/07/08 16:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/07/08 16:48	107-06-2	
1,1,2-Dichloroethene (Total)	8.3	ug/L	1.0	1		03/07/08 16:48	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/07/08 16:48	75-35-4	
cis-1,2-Dichloroethene	5.8	ug/L	1.0	1		03/07/08 16:48	156-59-2	
trans-1,2-Dichloroethene	2.6	ug/L	1.0	1		03/07/08 16:48	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/07/08 16:48	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/07/08 16:48	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/07/08 16:48	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/07/08 16:48	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/07/08 16:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/07/08 16:48	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		03/07/08 16:48	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/07/08 16:48	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		03/07/08 16:48	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		03/07/08 16:48	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/07/08 16:48	99-87-6	
Methylene chloride	ND	ug/L	1.0	1		03/07/08 16:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/07/08 16:48	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/07/08 16:48	1634-04-4	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE
Pace Project No.: 6036442

Sample: DP-9/GW01		Lab ID: 6036442006	Collected: 03/04/08 09:21	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Napthalene	ND	ug/L	10.0	1		03/07/08 16:48	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		03/07/08 16:48	103-65-1	
Styrene	ND	ug/L	1.0	1		03/07/08 16:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/07/08 16:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/07/08 16:48	79-34-5	
Tetrachloroethene	2130	ug/L	50.0	50		03/09/08 20:45	127-18-4	
Toluene	ND	ug/L	1.0	1		03/07/08 16:48	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/07/08 16:48	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/07/08 16:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/07/08 16:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/07/08 16:48	79-00-5	
Trichloroethene	4.2	ug/L	1.0	1		03/07/08 16:48	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		03/07/08 16:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		03/07/08 16:48	96-18-4	
1,2,4-Trimethylbenzene	1.2	ug/L	1.0	1		03/07/08 16:48	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		03/07/08 16:48	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		03/07/08 16:48	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		03/07/08 16:48	1330-20-7	
4-Bromofluorobenzene (S)	97	%	85-119	1		03/07/08 16:48	460-00-4	
Dibromofluoromethane (S)	104	%	85-114	1		03/07/08 16:48	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	81-118	1		03/07/08 16:48	17060-07-0	
Toluene-d8 (S)	99	%	82-114	1		03/07/08 16:48	2037-26-5	
Preservation pH	1.0		0.10	1		03/07/08 16:48		

ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DUP-1/GW01		Lab ID: 6036442007	Collected: 03/04/08 00:00	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Acetone	ND	ug/L	10.0	1		03/07/08 17:04	67-64-1	
Benzene	ND	ug/L	1.0	1		03/07/08 17:04	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/07/08 17:04	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/07/08 17:04	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/07/08 17:04	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/07/08 17:04	75-25-2	
Bromomethane	ND	ug/L	1.0	1		03/07/08 17:04	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/07/08 17:04	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		03/07/08 17:04	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		03/07/08 17:04	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		03/07/08 17:04	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		03/07/08 17:04	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		03/07/08 17:04	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/07/08 17:04	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/07/08 17:04	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/07/08 17:04	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/07/08 17:04	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/07/08 17:04	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/07/08 17:04	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		03/07/08 17:04	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/07/08 17:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/07/08 17:04	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/07/08 17:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 17:04	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 17:04	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 17:04	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/07/08 17:04	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/07/08 17:04	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/07/08 17:04	107-06-2	
1,2-Dichloroethene (Total)	9.9	ug/L	1.0	1		03/07/08 17:04	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/07/08 17:04	75-35-4	
cis-1,2-Dichloroethene	6.9	ug/L	1.0	1		03/07/08 17:04	156-59-2	
trans-1,2-Dichloroethene	3.0	ug/L	1.0	1		03/07/08 17:04	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/07/08 17:04	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/07/08 17:04	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/07/08 17:04	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/07/08 17:04	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/07/08 17:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/07/08 17:04	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		03/07/08 17:04	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/07/08 17:04	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		03/07/08 17:04	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		03/07/08 17:04	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/07/08 17:04	99-87-6	
Methylene chloride	ND	ug/L	1.0	1		03/07/08 17:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/07/08 17:04	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/07/08 17:04	1634-04-4	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DUP-1/GW01		Lab ID: 6036442007	Collected: 03/04/08 00:00	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Naphthalene	ND	ug/L	10.0	1		03/07/08 17:04	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		03/07/08 17:04	103-65-1	
Styrene	ND	ug/L	1.0	1		03/07/08 17:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/07/08 17:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/07/08 17:04	79-34-5	
Tetrachloroethene	2140	ug/L	50.0	50		03/09/08 21:02	127-18-4	
Toluene	ND	ug/L	1.0	1		03/07/08 17:04	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/07/08 17:04	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/07/08 17:04	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/07/08 17:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/07/08 17:04	79-00-5	
Trichloroethene	4.8	ug/L	1.0	1		03/07/08 17:04	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		03/07/08 17:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		03/07/08 17:04	96-18-4	
1,2,4-Trimethylbenzene	1.3	ug/L	1.0	1		03/07/08 17:04	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		03/07/08 17:04	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		03/07/08 17:04	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		03/07/08 17:04	1330-20-7	
4-Bromofluorobenzene (S)	99 %		85-119	1		03/07/08 17:04	460-00-4	
Dibromofluoromethane (S)	103 %		85-114	1		03/07/08 17:04	1868-53-7	
1,2-Dichloroethane-d4 (S)	99 %		81-118	1		03/07/08 17:04	17060-07-0	
Toluene-d8 (S)	100 %		82-114	1		03/07/08 17:04	2037-26-5	
Preservation pH	1.0		0.10	1		03/07/08 17:04		

ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-4/SB01 Lab ID: 6036442008 Collected: 03/04/08 09:42 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	26.6	1		03/11/08 20:56	67-64-1	
Benzene	ND	ug/kg	6.7	1		03/11/08 20:56	71-43-2	
Bromobenzene	ND	ug/kg	6.7	1		03/11/08 20:56	108-86-1	
Bromochloromethane	ND	ug/kg	6.7	1		03/11/08 20:56	74-97-5	
Bromodichloromethane	ND	ug/kg	6.7	1		03/11/08 20:56	75-27-4	
Bromoform	ND	ug/kg	6.7	1		03/11/08 20:56	75-25-2	
Bromomethane	ND	ug/kg	6.7	1		03/11/08 20:56	74-83-9	
2-Butanone (MEK)	ND	ug/kg	13.3	1		03/11/08 20:56	78-93-3	
n-Butylbenzene	ND	ug/kg	6.7	1		03/11/08 20:56	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.7	1		03/11/08 20:56	135-98-8	
tert-Butylbenzene	ND	ug/kg	6.7	1		03/11/08 20:56	98-06-6	
Carbon disulfide	ND	ug/kg	6.7	1		03/11/08 20:56	75-15-0	
Carbon tetrachloride	ND	ug/kg	6.7	1		03/11/08 20:56	56-23-5	
Chlorobenzene	ND	ug/kg	6.7	1		03/11/08 20:56	108-90-7	
Chloroethane	ND	ug/kg	6.7	1		03/11/08 20:56	75-00-3	
Chloroform	ND	ug/kg	6.7	1		03/11/08 20:56	67-66-3	
Chloromethane	ND	ug/kg	6.7	1		03/11/08 20:56	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.7	1		03/11/08 20:56	95-49-8	
4-Chlorotoluene	ND	ug/kg	6.7	1		03/11/08 20:56	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	13.3	1		03/11/08 20:56	96-12-8	
Dibromochloromethane	ND	ug/kg	6.7	1		03/11/08 20:56	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.7	1		03/11/08 20:56	106-93-4	
Dibromomethane	ND	ug/kg	6.7	1		03/11/08 20:56	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.7	1		03/11/08 20:56	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.7	1		03/11/08 20:56	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.7	1		03/11/08 20:56	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	6.7	1		03/11/08 20:56	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.7	1		03/11/08 20:56	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.7	1		03/11/08 20:56	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	6.7	1		03/11/08 20:56	540-59-0	
1,1-Dichloroethene	ND	ug/kg	6.7	1		03/11/08 20:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.7	1		03/11/08 20:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.7	1		03/11/08 20:56	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.7	1		03/11/08 20:56	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.7	1		03/11/08 20:56	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.7	1		03/11/08 20:56	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.7	1		03/11/08 20:56	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.7	1		03/11/08 20:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.7	1		03/11/08 20:56	10061-02-6	
Ethylbenzene	ND	ug/kg	6.7	1		03/11/08 20:56	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	6.7	1		03/11/08 20:56	87-68-3	
2-Hexanone	ND	ug/kg	26.6	1		03/11/08 20:56	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.7	1		03/11/08 20:56	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.7	1		03/11/08 20:56	99-87-6	
Methylene chloride	ND	ug/kg	6.7	1		03/11/08 20:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	13.3	1		03/11/08 20:56	108-10-1	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-4/SB01 Lab ID: 6036442008 Collected: 03/04/08 09:42 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA								
Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	6.7	1		03/11/08 20:56	1634-04-4	
Naphthalene	ND	ug/kg	13.3	1		03/11/08 20:56	91-20-3	
n-Propylbenzene	ND	ug/kg	6.7	1		03/11/08 20:56	103-65-1	
Styrene	ND	ug/kg	6.7	1		03/11/08 20:56	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.7	1		03/11/08 20:56	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.7	1		03/11/08 20:56	79-34-5	
Tetrachloroethene	1850	ug/kg	321	50		03/12/08 14:15	127-18-4	
Toluene	ND	ug/kg	6.7	1		03/11/08 20:56	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.7	1		03/11/08 20:56	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.7	1		03/11/08 20:56	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.7	1		03/11/08 20:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.7	1		03/11/08 20:56	79-00-5	
Trichloroethene	ND	ug/kg	6.7	1		03/11/08 20:56	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.7	1		03/11/08 20:56	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.7	1		03/11/08 20:56	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	6.7	1		03/11/08 20:56	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.7	1		03/11/08 20:56	108-67-8	
Vinyl chloride	ND	ug/kg	6.7	1		03/11/08 20:56	75-01-4	
Xylene (Total)	ND	ug/kg	6.7	1		03/11/08 20:56	1330-20-7	
Dibromofluoromethane (S)	103	%	82-119	1		03/11/08 20:56	1868-53-7	
Toluene-d8 (S)	97	%	76-120	1		03/11/08 20:56	2037-26-5	
4-Bromofluorobenzene (S)	99	%	71-124	1		03/11/08 20:56	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	82-125	1		03/11/08 20:56	17060-07-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	23.6 %	0.10	1	03/10/08 00:00
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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-4/GW01		Lab ID: 6036442009	Collected: 03/04/08 10:03	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Acetone	ND	ug/L	50.0	5		03/07/08 17:21	67-64-1	
Benzene	ND	ug/L	5.0	5		03/07/08 17:21	71-43-2	
Bromobenzene	ND	ug/L	5.0	5		03/07/08 17:21	108-86-1	
Bromochloromethane	ND	ug/L	5.0	5		03/07/08 17:21	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	5		03/07/08 17:21	75-27-4	
Bromoform	ND	ug/L	5.0	5		03/07/08 17:21	75-25-2	
Bromomethane	ND	ug/L	5.0	5		03/07/08 17:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	5		03/07/08 17:21	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	5		03/07/08 17:21	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	5		03/07/08 17:21	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	5		03/07/08 17:21	98-06-6	
Carbon disulfide	ND	ug/L	25.0	5		03/07/08 17:21	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	5		03/07/08 17:21	56-23-5	
Chlorobenzene	ND	ug/L	5.0	5		03/07/08 17:21	108-90-7	
Chloroethane	ND	ug/L	5.0	5		03/07/08 17:21	75-00-3	
Chloroform	ND	ug/L	5.0	5		03/07/08 17:21	67-66-3	
Chloromethane	ND	ug/L	5.0	5		03/07/08 17:21	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	5		03/07/08 17:21	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	5		03/07/08 17:21	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	12.5	5		03/07/08 17:21	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	5		03/07/08 17:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	5		03/07/08 17:21	106-93-4	
Dibromomethane	ND	ug/L	5.0	5		03/07/08 17:21	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 17:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 17:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 17:21	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	5		03/07/08 17:21	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	5		03/07/08 17:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	5		03/07/08 17:21	107-06-2	
1,2-Dichloroethene (Total)	26.4	ug/L	5.0	5		03/07/08 17:21	540-59-0	
1,1-Dichloroethene	ND	ug/L	5.0	5		03/07/08 17:21	75-35-4	
cis-1,2-Dichloroethene	24.3	ug/L	5.0	5		03/07/08 17:21	156-59-2	
trans-1,2-Dichloroethene	2.1	ug/L	5.0	5		03/07/08 17:21	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	5		03/07/08 17:21	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	5		03/07/08 17:21	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	5		03/07/08 17:21	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	5		03/07/08 17:21	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	5		03/07/08 17:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	5		03/07/08 17:21	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	5		03/07/08 17:21	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	5		03/07/08 17:21	87-68-3	
2-Hexanone	ND	ug/L	50.0	5		03/07/08 17:21	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	5		03/07/08 17:21	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	5		03/07/08 17:21	99-87-6	
Methylene chloride	ND	ug/L	5.0	5		03/07/08 17:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	5		03/07/08 17:21	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	5		03/07/08 17:21	1634-04-4	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-4/GW01		Lab ID: 6036442009	Collected: 03/04/08 10:03	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Naphthalene	ND	ug/L	50.0	5		03/07/08 17:21	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	5		03/07/08 17:21	103-65-1	
Styrene	ND	ug/L	5.0	5		03/07/08 17:21	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	5		03/07/08 17:21	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		03/07/08 17:21	79-34-5	
Tetrachloroethene	190	ug/L	5.0	5		03/09/08 21:18	127-18-4	
Toluene	ND	ug/L	5.0	5		03/07/08 17:21	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	5		03/07/08 17:21	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	5		03/07/08 17:21	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	5		03/07/08 17:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	5		03/07/08 17:21	79-00-5	
Trichloroethene	ND	ug/L	5.0	5		03/07/08 17:21	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	5		03/07/08 17:21	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	12.5	5		03/07/08 17:21	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	5		03/07/08 17:21	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	5		03/07/08 17:21	108-67-8	
Vinyl chloride	ND	ug/L	5.0	5		03/07/08 17:21	75-01-4	
Xylene (Total)	ND	ug/L	15.0	5		03/07/08 17:21	1330-20-7	
4-Bromofluorobenzene (S)	98 %		85-119	5		03/07/08 17:21	460-00-4	1e
Dibromofluoromethane (S)	101 %		85-114	5		03/07/08 17:21	1868-53-7	
1,2-Dichloroethane-d4 (S)	98 %		81-118	5		03/07/08 17:21	17060-07-0	
Toluene-d8 (S)	99 %		82-114	5		03/07/08 17:21	2037-26-5	
Preservation pH	1.0		0.10	5		03/07/08 17:21		

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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-2/SB02 Lab ID: 6036442010 Collected: 03/04/08 10:37 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	24.3	1		03/11/08 21:13	67-64-1	
Benzene	ND	ug/kg	6.1	1		03/11/08 21:13	71-43-2	
Bromobenzene	ND	ug/kg	6.1	1		03/11/08 21:13	108-86-1	
Bromochloromethane	ND	ug/kg	6.1	1		03/11/08 21:13	74-97-5	
Bromodichloromethane	ND	ug/kg	6.1	1		03/11/08 21:13	75-27-4	
Bromoform	ND	ug/kg	6.1	1		03/11/08 21:13	75-25-2	
Bromomethane	ND	ug/kg	6.1	1		03/11/08 21:13	74-83-9	
2-Butanone (MEK)	ND	ug/kg	12.1	1		03/11/08 21:13	78-93-3	
n-Butylbenzene	ND	ug/kg	6.1	1		03/11/08 21:13	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.1	1		03/11/08 21:13	135-98-8	
tert-Butylbenzene	ND	ug/kg	6.1	1		03/11/08 21:13	98-06-6	
Carbon disulfide	ND	ug/kg	6.1	1		03/11/08 21:13	75-15-0	
Carbon tetrachloride	ND	ug/kg	6.1	1		03/11/08 21:13	56-23-5	
Chlorobenzene	ND	ug/kg	6.1	1		03/11/08 21:13	108-90-7	
Chloroethane	ND	ug/kg	6.1	1		03/11/08 21:13	75-00-3	
Chloroform	ND	ug/kg	6.1	1		03/11/08 21:13	67-66-3	
Chloromethane	ND	ug/kg	6.1	1		03/11/08 21:13	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.1	1		03/11/08 21:13	95-49-8	
4-Chlorotoluene	ND	ug/kg	6.1	1		03/11/08 21:13	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	12.1	1		03/11/08 21:13	96-12-8	
Dibromochloromethane	ND	ug/kg	6.1	1		03/11/08 21:13	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.1	1		03/11/08 21:13	106-93-4	
Dibromomethane	ND	ug/kg	6.1	1		03/11/08 21:13	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.1	1		03/11/08 21:13	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.1	1		03/11/08 21:13	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.1	1		03/11/08 21:13	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	6.1	1		03/11/08 21:13	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.1	1		03/11/08 21:13	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.1	1		03/11/08 21:13	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	6.1	1		03/11/08 21:13	540-59-0	
1,1-Dichloroethene	ND	ug/kg	6.1	1		03/11/08 21:13	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.1	1		03/11/08 21:13	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.1	1		03/11/08 21:13	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.1	1		03/11/08 21:13	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.1	1		03/11/08 21:13	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.1	1		03/11/08 21:13	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.1	1		03/11/08 21:13	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.1	1		03/11/08 21:13	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.1	1		03/11/08 21:13	10061-02-6	
Ethylbenzene	ND	ug/kg	6.1	1		03/11/08 21:13	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	6.1	1		03/11/08 21:13	87-68-3	
2-Hexanone	ND	ug/kg	24.3	1		03/11/08 21:13	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.1	1		03/11/08 21:13	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.1	1		03/11/08 21:13	99-87-6	
Methylene chloride	ND	ug/kg	6.1	1		03/11/08 21:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	12.1	1		03/11/08 21:13	108-10-1	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-2/SB02 Lab ID: 6036442010 Collected: 03/04/08 10:37 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA								
Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	6.1	1		03/11/08 21:13	1634-04-4	
Naphthalene	ND	ug/kg	12.1	1		03/11/08 21:13	91-20-3	
n-Propylbenzene	ND	ug/kg	6.1	1		03/11/08 21:13	103-65-1	
Styrene	ND	ug/kg	6.1	1		03/11/08 21:13	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.1	1		03/11/08 21:13	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.1	1		03/11/08 21:13	79-34-5	
Tetrachloroethene	ND	ug/kg	6.1	1		03/12/08 14:32	127-18-4	
Toluene	ND	ug/kg	6.1	1		03/11/08 21:13	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.1	1		03/11/08 21:13	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.1	1		03/11/08 21:13	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.1	1		03/11/08 21:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.1	1		03/11/08 21:13	79-00-5	
Trichloroethene	ND	ug/kg	6.1	1		03/11/08 21:13	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.1	1		03/11/08 21:13	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.1	1		03/11/08 21:13	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	6.1	1		03/11/08 21:13	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.1	1		03/11/08 21:13	108-67-8	
Vinyl chloride	ND	ug/kg	6.1	1		03/11/08 21:13	75-01-4	
Xylene (Total)	ND	ug/kg	6.1	1		03/11/08 21:13	1330-20-7	
Dibromofluoromethane (S)	104	%	82-119	1		03/11/08 21:13	1868-53-7	
Toluene-d8 (S)	100	%	76-120	1		03/11/08 21:13	2037-26-5	
4-Bromofluorobenzene (S)	96	%	71-124	1		03/11/08 21:13	460-00-4	
1,2-Dichloroethane-d4 (S)	103	%	82-125	1		03/11/08 21:13	17060-07-0	
Percent Moisture								
Analytical Method: ASTM D2974-87								
Percent Moisture	18.1	%	0.10	1		03/10/08 00:00		

ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-2/GW01		Lab ID: 6036442011	Collected: 03/04/08 10:55	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Acetone	ND	ug/L	50.0	5		03/07/08 17:37	67-64-1	
Benzene	ND	ug/L	5.0	5		03/07/08 17:37	71-43-2	
Bromobenzene	ND	ug/L	5.0	5		03/07/08 17:37	108-86-1	
Bromochloromethane	ND	ug/L	5.0	5		03/07/08 17:37	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	5		03/07/08 17:37	75-27-4	
Bromoform	ND	ug/L	5.0	5		03/07/08 17:37	75-25-2	
Bromomethane	ND	ug/L	5.0	5		03/07/08 17:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	5		03/07/08 17:37	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	5		03/07/08 17:37	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	5		03/07/08 17:37	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	5		03/07/08 17:37	98-06-6	
Carbon disulfide	ND	ug/L	25.0	5		03/07/08 17:37	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	5		03/07/08 17:37	56-23-5	
Chlorobenzene	ND	ug/L	5.0	5		03/07/08 17:37	108-90-7	
Chloroethane	ND	ug/L	5.0	5		03/07/08 17:37	75-00-3	
Chloroform	ND	ug/L	5.0	5		03/07/08 17:37	67-66-3	
Chloromethane	ND	ug/L	5.0	5		03/07/08 17:37	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	5		03/07/08 17:37	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	5		03/07/08 17:37	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	12.5	5		03/07/08 17:37	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	5		03/07/08 17:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	5		03/07/08 17:37	106-93-4	
Dibromomethane	ND	ug/L	5.0	5		03/07/08 17:37	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 17:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 17:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 17:37	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	5		03/07/08 17:37	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	5		03/07/08 17:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	5		03/07/08 17:37	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	5.0	5		03/07/08 17:37	540-59-0	
1,1-Dichloroethene	ND	ug/L	5.0	5		03/07/08 17:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	5		03/07/08 17:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	5		03/07/08 17:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	5		03/07/08 17:37	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	5		03/07/08 17:37	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	5		03/07/08 17:37	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	5		03/07/08 17:37	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	5		03/07/08 17:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	5		03/07/08 17:37	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	5		03/07/08 17:37	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	5		03/07/08 17:37	87-68-3	
2-Hexanone	ND	ug/L	50.0	5		03/07/08 17:37	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	5		03/07/08 17:37	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	5		03/07/08 17:37	99-87-6	
Methylene chloride	ND	ug/L	5.0	5		03/07/08 17:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	5		03/07/08 17:37	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	5		03/07/08 17:37	1634-04-4	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-2/GW01		Lab ID: 6036442011	Collected: 03/04/08 10:55	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Naphthalene	ND	ug/L	50.0	5		03/07/08 17:37	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	5		03/07/08 17:37	103-65-1	
Styrene	ND	ug/L	5.0	5		03/07/08 17:37	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	5		03/07/08 17:37	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		03/07/08 17:37	79-34-5	
1,1,2,2-Tetrachloroethane	34.0	ug/L	5.0	5		03/07/08 17:37	127-18-4	
Toluene	ND	ug/L	5.0	5		03/07/08 17:37	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	5		03/07/08 17:37	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	5		03/07/08 17:37	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	5		03/07/08 17:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	5		03/07/08 17:37	79-00-5	
Trichloroethene	ND	ug/L	5.0	5		03/07/08 17:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	5		03/07/08 17:37	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	12.5	5		03/07/08 17:37	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	5		03/07/08 17:37	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	5		03/07/08 17:37	108-67-8	
Vinyl chloride	ND	ug/L	5.0	5		03/07/08 17:37	75-01-4	
Xylene (Total)	ND	ug/L	15.0	5		03/07/08 17:37	1330-20-7	
4-Bromofluorobenzene (S)	99 %		85-119	5		03/07/08 17:37	460-00-4	1e
Dibromofluoromethane (S)	101 %		85-114	5		03/07/08 17:37	1868-53-7	
1,2-Dichloroethane-d4 (S)	98 %		81-118	5		03/07/08 17:37	17060-07-0	
Toluene-d8 (S)	99 %		82-114	5		03/07/08 17:37	2037-26-5	
Preservation pH	1.0		0.10	5		03/07/08 17:37		

ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-3/SB03 Lab ID: 6036442012 Collected: 03/04/08 11:49 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	23.3	1		03/11/08 21:30	67-64-1	
Benzene	ND	ug/kg	5.8	1		03/11/08 21:30	71-43-2	
Bromobenzene	ND	ug/kg	5.8	1		03/11/08 21:30	108-86-1	
Bromochloromethane	ND	ug/kg	5.8	1		03/11/08 21:30	74-97-5	
Bromodichloromethane	ND	ug/kg	5.8	1		03/11/08 21:30	75-27-4	
Bromoform	ND	ug/kg	5.8	1		03/11/08 21:30	75-25-2	
Bromomethane	ND	ug/kg	5.8	1		03/11/08 21:30	74-83-9	
2-Butanone (MEK)	ND	ug/kg	11.7	1		03/11/08 21:30	78-93-3	
n-Butylbenzene	ND	ug/kg	5.8	1		03/11/08 21:30	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.8	1		03/11/08 21:30	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.8	1		03/11/08 21:30	98-06-6	
Carbon disulfide	ND	ug/kg	5.8	1		03/11/08 21:30	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.8	1		03/11/08 21:30	56-23-5	
Chlorobenzene	ND	ug/kg	5.8	1		03/11/08 21:30	108-90-7	
Chloroethane	ND	ug/kg	5.8	1		03/11/08 21:30	75-00-3	
Chloroform	ND	ug/kg	5.8	1		03/11/08 21:30	67-66-3	
Chloromethane	ND	ug/kg	5.8	1		03/11/08 21:30	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.8	1		03/11/08 21:30	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.8	1		03/11/08 21:30	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	11.7	1		03/11/08 21:30	96-12-8	
Dibromochloromethane	ND	ug/kg	5.8	1		03/11/08 21:30	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.8	1		03/11/08 21:30	106-93-4	
Dibromomethane	ND	ug/kg	5.8	1		03/11/08 21:30	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.8	1		03/11/08 21:30	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.8	1		03/11/08 21:30	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.8	1		03/11/08 21:30	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	5.8	1		03/11/08 21:30	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.8	1		03/11/08 21:30	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.8	1		03/11/08 21:30	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.8	1		03/11/08 21:30	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.8	1		03/11/08 21:30	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.8	1		03/11/08 21:30	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.8	1		03/11/08 21:30	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.8	1		03/11/08 21:30	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.8	1		03/11/08 21:30	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.8	1		03/11/08 21:30	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.8	1		03/11/08 21:30	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.8	1		03/11/08 21:30	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.8	1		03/11/08 21:30	10061-02-6	
Ethylbenzene	ND	ug/kg	5.8	1		03/11/08 21:30	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.8	1		03/11/08 21:30	87-68-3	
2-Hexanone	ND	ug/kg	23.3	1		03/11/08 21:30	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.8	1		03/11/08 21:30	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.8	1		03/11/08 21:30	99-87-6	
Methylene chloride	ND	ug/kg	5.8	1		03/11/08 21:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	11.7	1		03/11/08 21:30	108-10-1	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE
Pace Project No.: 6036442

Sample: DP-3/SB03 Lab ID: 6036442012 Collected: 03/04/08 11:49 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA								
Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	5.8	1		03/11/08 21:30	1634-04-4	
Naphthalene	ND	ug/kg	11.7	1		03/11/08 21:30	91-20-3	
n-Propylbenzene	ND	ug/kg	5.8	1		03/11/08 21:30	103-65-1	
Styrene	ND	ug/kg	5.8	1		03/11/08 21:30	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.8	1		03/11/08 21:30	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.8	1		03/11/08 21:30	79-34-5	
Tetrachloroethene	ND	ug/kg	5.8	1		03/11/08 21:30	127-18-4	
Toluene	ND	ug/kg	5.8	1		03/11/08 21:30	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.8	1		03/11/08 21:30	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.8	1		03/11/08 21:30	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.8	1		03/11/08 21:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.8	1		03/11/08 21:30	79-00-5	
Trichloroethene	ND	ug/kg	5.8	1		03/11/08 21:30	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.8	1		03/11/08 21:30	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.8	1		03/11/08 21:30	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.8	1		03/11/08 21:30	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.8	1		03/11/08 21:30	108-67-8	
Vinyl chloride	ND	ug/kg	5.8	1		03/11/08 21:30	75-01-4	
Xylene (Total)	ND	ug/kg	5.8	1		03/11/08 21:30	1330-20-7	
Dibromofluoromethane (S)	101	%	82-119	1		03/11/08 21:30	1868-53-7	
Toluene-d8 (S)	95	%	76-120	1		03/11/08 21:30	2037-26-5	
4-Bromofluorobenzene (S)	86	%	71-124	1		03/11/08 21:30	460-00-4	
1,2-Dichloroethane-d4 (S)	102	%	82-125	1		03/11/08 21:30	17060-07-0	
Percent Moisture								
Analytical Method: ASTM D2974-87								
Percent Moisture	15.1	%	0.10	1		03/10/08 00:00		

ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-3/GW01		Lab ID: 6036442013	Collected: 03/04/08 12:04	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Acetone	ND	ug/L	10.0	1		03/07/08 17:54	67-64-1	
Benzene	ND	ug/L	1.0	1		03/07/08 17:54	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/07/08 17:54	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/07/08 17:54	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/07/08 17:54	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/07/08 17:54	75-25-2	
Bromomethane	ND	ug/L	1.0	1		03/07/08 17:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/07/08 17:54	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		03/07/08 17:54	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		03/07/08 17:54	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		03/07/08 17:54	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		03/07/08 17:54	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		03/07/08 17:54	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/07/08 17:54	108-90-7	
Chloroethane	ND	ug/L	1.0	1		03/07/08 17:54	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/07/08 17:54	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/07/08 17:54	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/07/08 17:54	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/07/08 17:54	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		03/07/08 17:54	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/07/08 17:54	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/07/08 17:54	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/07/08 17:54	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 17:54	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 17:54	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 17:54	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/07/08 17:54	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/07/08 17:54	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/07/08 17:54	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	1.0	1		03/07/08 17:54	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/07/08 17:54	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		03/07/08 17:54	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		03/07/08 17:54	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/07/08 17:54	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/07/08 17:54	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/07/08 17:54	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/07/08 17:54	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/07/08 17:54	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/07/08 17:54	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		03/07/08 17:54	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/07/08 17:54	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		03/07/08 17:54	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		03/07/08 17:54	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/07/08 17:54	99-87-6	
Methylene chloride	ND	ug/L	1.0	1		03/07/08 17:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/07/08 17:54	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/07/08 17:54	1634-04-4	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-3/GW01 Lab ID: 6036442013 Collected: 03/04/08 12:04 Received: 03/05/08 17:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Naphthalene	ND	ug/L	10.0	1		03/07/08 17:54	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		03/07/08 17:54	103-65-1	
Styrene	ND	ug/L	1.0	1		03/07/08 17:54	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/07/08 17:54	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/07/08 17:54	79-34-5	
Tetrachloroethene	66.4	ug/L	1.0	1		03/07/08 17:54	127-18-4	
Toluene	ND	ug/L	1.0	1		03/07/08 17:54	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/07/08 17:54	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/07/08 17:54	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/07/08 17:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/07/08 17:54	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		03/07/08 17:54	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		03/07/08 17:54	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		03/07/08 17:54	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		03/07/08 17:54	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		03/07/08 17:54	108-67-8	
Vinyl chloride	ND	ug/L	1.0	1		03/07/08 17:54	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		03/07/08 17:54	1330-20-7	
4-Bromofluorobenzene (S)	97 %		85-119	1		03/07/08 17:54	460-00-4	
Dibromofluoromethane (S)	102 %		85-114	1		03/07/08 17:54	1868-53-7	
1,2-Dichloroethane-d4 (S)	100 %		81-118	1		03/07/08 17:54	17060-07-0	
Toluene-d8 (S)	101 %		82-114	1		03/07/08 17:54	2037-26-5	
Preservation pH	1.0		0.10	1		03/07/08 17:54		

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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-1/SB01 Lab ID: 6036442014 Collected: 03/04/08 12:32 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	25.2	1		03/11/08 21:47	67-64-1	
Benzene	ND	ug/kg	6.3	1		03/11/08 21:47	71-43-2	
Bromobenzene	ND	ug/kg	6.3	1		03/11/08 21:47	108-86-1	
Bromochloromethane	ND	ug/kg	6.3	1		03/11/08 21:47	74-97-5	
Bromodichloromethane	ND	ug/kg	6.3	1		03/11/08 21:47	75-27-4	
Bromoform	ND	ug/kg	6.3	1		03/11/08 21:47	75-25-2	
Bromomethane	ND	ug/kg	6.3	1		03/11/08 21:47	74-83-9	
2-Butanone (MEK)	ND	ug/kg	12.6	1		03/11/08 21:47	78-93-3	
n-Butylbenzene	ND	ug/kg	6.3	1		03/11/08 21:47	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.3	1		03/11/08 21:47	135-98-8	
tert-Butylbenzene	ND	ug/kg	6.3	1		03/11/08 21:47	98-06-6	
Carbon disulfide	ND	ug/kg	6.3	1		03/11/08 21:47	75-15-0	
Carbon tetrachloride	ND	ug/kg	6.3	1		03/11/08 21:47	56-23-5	
Chlorobenzene	ND	ug/kg	6.3	1		03/11/08 21:47	108-90-7	
Chloroethane	ND	ug/kg	6.3	1		03/11/08 21:47	75-00-3	
Chloroform	ND	ug/kg	6.3	1		03/11/08 21:47	67-66-3	
Chloromethane	ND	ug/kg	6.3	1		03/11/08 21:47	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.3	1		03/11/08 21:47	95-49-8	
4-Chlorotoluene	ND	ug/kg	6.3	1		03/11/08 21:47	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	12.6	1		03/11/08 21:47	96-12-8	
Dibromochloromethane	ND	ug/kg	6.3	1		03/11/08 21:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.3	1		03/11/08 21:47	106-93-4	
Dibromomethane	ND	ug/kg	6.3	1		03/11/08 21:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.3	1		03/11/08 21:47	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.3	1		03/11/08 21:47	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.3	1		03/11/08 21:47	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	6.3	1		03/11/08 21:47	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.3	1		03/11/08 21:47	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.3	1		03/11/08 21:47	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	6.3	1		03/11/08 21:47	540-59-0	
1,1-Dichloroethene	ND	ug/kg	6.3	1		03/11/08 21:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.3	1		03/11/08 21:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.3	1		03/11/08 21:47	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.3	1		03/11/08 21:47	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.3	1		03/11/08 21:47	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.3	1		03/11/08 21:47	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.3	1		03/11/08 21:47	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.3	1		03/11/08 21:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.3	1		03/11/08 21:47	10061-02-6	
Ethylbenzene	ND	ug/kg	6.3	1		03/11/08 21:47	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	6.3	1		03/11/08 21:47	87-68-3	
2-Hexanone	ND	ug/kg	25.2	1		03/11/08 21:47	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.3	1		03/11/08 21:47	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.3	1		03/11/08 21:47	99-87-6	
Methylene chloride	ND	ug/kg	6.3	1		03/11/08 21:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	12.6	1		03/11/08 21:47	108-10-1	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE
Pace Project No.: 6036442

Sample: DP-1/SB01 Lab ID: 6036442014 Collected: 03/04/08 12:32 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA								
Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	6.3	1		03/11/08 21:47	1634-04-4	
Naphthalene	ND	ug/kg	12.6	1		03/11/08 21:47	91-20-3	
n-Propylbenzene	ND	ug/kg	6.3	1		03/11/08 21:47	103-65-1	
Styrene	ND	ug/kg	6.3	1		03/11/08 21:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.3	1		03/11/08 21:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.3	1		03/11/08 21:47	79-34-5	
Tetrachloroethene	18.4	ug/kg	6.3	1		03/11/08 21:47	127-18-4	
Toluene	ND	ug/kg	6.3	1		03/11/08 21:47	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.3	1		03/11/08 21:47	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.3	1		03/11/08 21:47	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.3	1		03/11/08 21:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.3	1		03/11/08 21:47	79-00-5	
Trichloroethene	ND	ug/kg	6.3	1		03/11/08 21:47	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.3	1		03/11/08 21:47	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.3	1		03/11/08 21:47	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	6.3	1		03/11/08 21:47	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.3	1		03/11/08 21:47	108-67-8	
Vinyl chloride	ND	ug/kg	6.3	1		03/11/08 21:47	75-01-4	
Xylene (Total)	ND	ug/kg	6.3	1		03/11/08 21:47	1330-20-7	
Dibromofluoromethane (S)	106	%	82-119	1		03/11/08 21:47	1868-53-7	
Toluene-d8 (S)	102	%	76-120	1		03/11/08 21:47	2037-26-5	
4-Bromofluorobenzene (S)	101	%	71-124	1		03/11/08 21:47	460-00-4	
1,2-Dichloroethane-d4 (S)	114	%	82-125	1		03/11/08 21:47	17060-07-0	
Percent Moisture								
Analytical Method: ASTM D2974-87								
Percent Moisture	19.6	%	0.10	1		03/10/08 00:00		

ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-1/GW01 Lab ID: 6036442015 Collected: 03/04/08 13:00 Received: 03/05/08 17:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Acetone	ND	ug/L	50.0	5		03/07/08 18:10	67-64-1	
Benzene	ND	ug/L	5.0	5		03/07/08 18:10	71-43-2	
Bromobenzene	ND	ug/L	5.0	5		03/07/08 18:10	108-86-1	
Bromochloromethane	ND	ug/L	5.0	5		03/07/08 18:10	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	5		03/07/08 18:10	75-27-4	
Bromoform	ND	ug/L	5.0	5		03/07/08 18:10	75-25-2	
Bromomethane	ND	ug/L	5.0	5		03/07/08 18:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	5		03/07/08 18:10	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	5		03/07/08 18:10	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	5		03/07/08 18:10	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	5		03/07/08 18:10	98-06-6	
Carbon disulfide	ND	ug/L	25.0	5		03/07/08 18:10	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	5		03/07/08 18:10	56-23-5	
Chlorobenzene	ND	ug/L	5.0	5		03/07/08 18:10	108-90-7	
Chloroethane	ND	ug/L	5.0	5		03/07/08 18:10	75-00-3	
Chloroform	ND	ug/L	5.0	5		03/07/08 18:10	67-66-3	
Chloromethane	ND	ug/L	5.0	5		03/07/08 18:10	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	5		03/07/08 18:10	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	5		03/07/08 18:10	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	12.5	5		03/07/08 18:10	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	5		03/07/08 18:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	5		03/07/08 18:10	106-93-4	
Dibromomethane	ND	ug/L	5.0	5		03/07/08 18:10	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 18:10	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 18:10	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 18:10	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	5		03/07/08 18:10	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	5		03/07/08 18:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	5		03/07/08 18:10	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	5.0	5		03/07/08 18:10	540-59-0	
1,1-Dichloroethene	ND	ug/L	5.0	5		03/07/08 18:10	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	5		03/07/08 18:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	5		03/07/08 18:10	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	5		03/07/08 18:10	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	5		03/07/08 18:10	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	5		03/07/08 18:10	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	5		03/07/08 18:10	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	5		03/07/08 18:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	5		03/07/08 18:10	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	5		03/07/08 18:10	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	5		03/07/08 18:10	87-68-3	
2-Hexanone	ND	ug/L	50.0	5		03/07/08 18:10	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	5		03/07/08 18:10	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	5		03/07/08 18:10	99-87-6	
Methylene chloride	ND	ug/L	5.0	5		03/07/08 18:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	5		03/07/08 18:10	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	5		03/07/08 18:10	1634-04-4	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE
Pace Project No.: 6036442

Sample: DP-1/GW01		Lab ID: 6036442015	Collected: 03/04/08 13:00	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Naphthalene	ND	ug/L	50.0	5		03/07/08 18:10	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	5		03/07/08 18:10	103-65-1	
Styrene	ND	ug/L	5.0	5		03/07/08 18:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	5		03/07/08 18:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		03/07/08 18:10	79-34-5	
Tetrachloroethene	12.0	ug/L	5.0	5		03/07/08 18:10	127-18-4	
Toluene	ND	ug/L	5.0	5		03/07/08 18:10	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	5		03/07/08 18:10	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	5		03/07/08 18:10	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	5		03/07/08 18:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	5		03/07/08 18:10	79-00-5	
Trichloroethene	ND	ug/L	5.0	5		03/07/08 18:10	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	5		03/07/08 18:10	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	12.5	5		03/07/08 18:10	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	5		03/07/08 18:10	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	5		03/07/08 18:10	108-67-8	
Vinyl chloride	ND	ug/L	5.0	5		03/07/08 18:10	75-01-4	
Xylene (Total)	ND	ug/L	15.0	5		03/07/08 18:10	1330-20-7	
4-Bromofluorobenzene (S)	97	%	85-119	5		03/07/08 18:10	460-00-4	1e
Dibromofluoromethane (S)	102	%	85-114	5		03/07/08 18:10	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	81-118	5		03/07/08 18:10	17060-07-0	
Toluene-d8 (S)	99	%	82-114	5		03/07/08 18:10	2037-26-5	
Preservation pH	1.0		0.10	5		03/07/08 18:10		

ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-8/SB02 Lab ID: 6036442016 Collected: 03/04/08 13:35 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	24.7	1		03/11/08 22:04	67-64-1	
Benzene	ND	ug/kg	6.2	1		03/11/08 22:04	71-43-2	
Bromobenzene	ND	ug/kg	6.2	1		03/11/08 22:04	108-86-1	
Bromochloromethane	ND	ug/kg	6.2	1		03/11/08 22:04	74-97-5	
Bromodichloromethane	ND	ug/kg	6.2	1		03/11/08 22:04	75-27-4	
Bromoform	ND	ug/kg	6.2	1		03/11/08 22:04	75-25-2	
Bromomethane	ND	ug/kg	6.2	1		03/11/08 22:04	74-83-9	
2-Butanone (MEK)	ND	ug/kg	12.4	1		03/11/08 22:04	78-93-3	
n-Butylbenzene	ND	ug/kg	6.2	1		03/11/08 22:04	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.2	1		03/11/08 22:04	135-98-8	
tert-Butylbenzene	ND	ug/kg	6.2	1		03/11/08 22:04	98-06-6	
Carbon disulfide	ND	ug/kg	6.2	1		03/11/08 22:04	75-15-0	
Carbon tetrachloride	ND	ug/kg	6.2	1		03/11/08 22:04	56-23-5	
Chlorobenzene	ND	ug/kg	6.2	1		03/11/08 22:04	108-90-7	
Chloroethane	ND	ug/kg	6.2	1		03/11/08 22:04	75-00-3	
Chloroform	ND	ug/kg	6.2	1		03/11/08 22:04	67-66-3	
Chloromethane	ND	ug/kg	6.2	1		03/11/08 22:04	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.2	1		03/11/08 22:04	95-49-8	
4-Chlorotoluene	ND	ug/kg	6.2	1		03/11/08 22:04	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	12.4	1		03/11/08 22:04	96-12-8	
Dibromochloromethane	ND	ug/kg	6.2	1		03/11/08 22:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.2	1		03/11/08 22:04	106-93-4	
Dibromomethane	ND	ug/kg	6.2	1		03/11/08 22:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.2	1		03/11/08 22:04	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.2	1		03/11/08 22:04	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.2	1		03/11/08 22:04	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	6.2	1		03/11/08 22:04	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.2	1		03/11/08 22:04	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.2	1		03/11/08 22:04	107-06-2	
cis-1,2-Dichloroethene (Total)	19.4	ug/kg	6.2	1		03/11/08 22:04	540-59-0	
1,1-Dichloroethene	ND	ug/kg	6.2	1		03/11/08 22:04	75-35-4	
cis-1,2-Dichloroethene	14.8	ug/kg	6.2	1		03/11/08 22:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.2	1		03/11/08 22:04	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.2	1		03/11/08 22:04	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.2	1		03/11/08 22:04	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.2	1		03/11/08 22:04	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.2	1		03/11/08 22:04	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.2	1		03/11/08 22:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.2	1		03/11/08 22:04	10061-02-6	
Ethylbenzene	ND	ug/kg	6.2	1		03/11/08 22:04	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	6.2	1		03/11/08 22:04	87-68-3	
2-Hexanone	ND	ug/kg	24.7	1		03/11/08 22:04	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.2	1		03/11/08 22:04	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.2	1		03/11/08 22:04	99-87-6	
Methylene chloride	ND	ug/kg	6.2	1		03/11/08 22:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	12.4	1		03/11/08 22:04	108-10-1	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE
Pace Project No.: 6036442

Sample: DP-8/SB02 Lab ID: 6036442016 Collected: 03/04/08 13:35 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA								
Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	6.2	1		03/11/08 22:04	1634-04-4	
Naphthalene	ND	ug/kg	12.4	1		03/11/08 22:04	91-20-3	
n-Propylbenzene	ND	ug/kg	6.2	1		03/11/08 22:04	103-65-1	
Styrene	ND	ug/kg	6.2	1		03/11/08 22:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.2	1		03/11/08 22:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.2	1		03/11/08 22:04	79-34-5	
Tetrachloroethene	262	ug/kg	6.2	1		03/11/08 22:04	127-18-4	
Toluene	ND	ug/kg	6.2	1		03/11/08 22:04	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.2	1		03/11/08 22:04	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.2	1		03/11/08 22:04	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.2	1		03/11/08 22:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.2	1		03/11/08 22:04	79-00-5	
Trichloroethene	10.5	ug/kg	6.2	1		03/11/08 22:04	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.2	1		03/11/08 22:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.2	1		03/11/08 22:04	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	6.2	1		03/11/08 22:04	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.2	1		03/11/08 22:04	108-67-8	
Vinyl chloride	ND	ug/kg	6.2	1		03/11/08 22:04	75-01-4	
Xylene (Total)	ND	ug/kg	6.2	1		03/11/08 22:04	1330-20-7	
Dibromofluoromethane (S)	102	%	82-119	1		03/11/08 22:04	1868-53-7	
Toluene-d8 (S)	98	%	76-120	1		03/11/08 22:04	2037-26-5	
4-Bromofluorobenzene (S)	103	%	71-124	1		03/11/08 22:04	460-00-4	
1,2-Dichloroethane-d4 (S)	104	%	82-125	1		03/11/08 22:04	17060-07-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	17.5 %	0.10	1	03/10/08 00:00
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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DUP-1/SB02 Lab ID: 6036442017 Collected: 03/04/08 00:00 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	23.8	1		03/12/08 07:57	67-64-1	
Benzene	ND	ug/kg	5.9	1		03/12/08 07:57	71-43-2	
Bromobenzene	ND	ug/kg	5.9	1		03/12/08 07:57	108-86-1	
Bromochloromethane	ND	ug/kg	5.9	1		03/12/08 07:57	74-97-5	
Bromodichloromethane	ND	ug/kg	5.9	1		03/12/08 07:57	75-27-4	
Bromoform	ND	ug/kg	5.9	1		03/12/08 07:57	75-25-2	
Bromomethane	ND	ug/kg	5.9	1		03/12/08 07:57	74-83-9	
2-Butanone (MEK)	ND	ug/kg	11.9	1		03/12/08 07:57	78-93-3	
n-Butylbenzene	ND	ug/kg	5.9	1		03/12/08 07:57	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.9	1		03/12/08 07:57	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.9	1		03/12/08 07:57	98-06-6	
Carbon disulfide	ND	ug/kg	5.9	1		03/12/08 07:57	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.9	1		03/12/08 07:57	56-23-5	
Chlorobenzene	ND	ug/kg	5.9	1		03/12/08 07:57	108-90-7	
Chloroethane	ND	ug/kg	5.9	1		03/12/08 07:57	75-00-3	
Chloroform	ND	ug/kg	5.9	1		03/12/08 07:57	67-66-3	
Chloromethane	ND	ug/kg	5.9	1		03/12/08 07:57	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.9	1		03/12/08 07:57	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.9	1		03/12/08 07:57	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	11.9	1		03/12/08 07:57	96-12-8	
Dibromochloromethane	ND	ug/kg	5.9	1		03/12/08 07:57	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.9	1		03/12/08 07:57	106-93-4	
Dibromomethane	ND	ug/kg	5.9	1		03/12/08 07:57	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.9	1		03/12/08 07:57	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.9	1		03/12/08 07:57	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.9	1		03/12/08 07:57	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	5.9	1		03/12/08 07:57	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.9	1		03/12/08 07:57	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.9	1		03/12/08 07:57	107-06-2	
1,2-Dichloroethene (Total)	13.5	ug/kg	5.9	1		03/12/08 07:57	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.9	1		03/12/08 07:57	75-35-4	
cis-1,2-Dichloroethene	10.6	ug/kg	5.9	1		03/12/08 07:57	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.9	1		03/12/08 07:57	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.9	1		03/12/08 07:57	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.9	1		03/12/08 07:57	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.9	1		03/12/08 07:57	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.9	1		03/12/08 07:57	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.9	1		03/12/08 07:57	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.9	1		03/12/08 07:57	10061-02-6	
Ethylbenzene	ND	ug/kg	5.9	1		03/12/08 07:57	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.9	1		03/12/08 07:57	87-68-3	
2-Hexanone	ND	ug/kg	23.8	1		03/12/08 07:57	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.9	1		03/12/08 07:57	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.9	1		03/12/08 07:57	99-87-6	
Methylene chloride	ND	ug/kg	5.9	1		03/12/08 07:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	11.9	1		03/12/08 07:57	108-10-1	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DUP-1/SB02 Lab ID: 6036442017 Collected: 03/04/08 00:00 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA								
Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	5.9	1		03/12/08 07:57	1634-04-4	
Naphthalene	ND	ug/kg	11.9	1		03/12/08 07:57	91-20-3	
n-Propylbenzene	ND	ug/kg	5.9	1		03/12/08 07:57	103-65-1	
Styrene	ND	ug/kg	5.9	1		03/12/08 07:57	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.9	1		03/12/08 07:57	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.9	1		03/12/08 07:57	79-34-5	
Tetrachloroethene	319	ug/kg	5.9	1		03/12/08 07:57	127-18-4	
Toluene	ND	ug/kg	5.9	1		03/12/08 07:57	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.9	1		03/12/08 07:57	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.9	1		03/12/08 07:57	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.9	1		03/12/08 07:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.9	1		03/12/08 07:57	79-00-5	
Trichloroethene	8.0	ug/kg	5.9	1		03/12/08 07:57	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.9	1		03/12/08 07:57	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.9	1		03/12/08 07:57	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.9	1		03/12/08 07:57	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.9	1		03/12/08 07:57	108-67-8	
Vinyl chloride	ND	ug/kg	5.9	1		03/12/08 07:57	75-01-4	
Xylene (Total)	ND	ug/kg	5.9	1		03/12/08 07:57	1330-20-7	
Dibromofluoromethane (S)	88 %		82-119	1		03/12/08 07:57	1868-53-7	
Toluene-d8 (S)	93 %		76-120	1		03/12/08 07:57	2037-26-5	
4-Bromofluorobenzene (S)	92 %		71-124	1		03/12/08 07:57	460-00-4	
1,2-Dichloroethane-d4 (S)	84 %		82-125	1		03/12/08 07:57	17060-07-0	

Percent Moisture

Analytical Method: ASTM D2974-87

Percent Moisture	17.1 %	0.10	1	03/10/08 00:00
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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-8/GW01		Lab ID: 6036442018	Collected: 03/04/08 13:53	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Acetone	ND	ug/L	10.0	1		03/07/08 18:27	67-64-1	
Benzene	ND	ug/L	1.0	1		03/07/08 18:27	71-43-2	
Bromobenzene	ND	ug/L	1.0	1		03/07/08 18:27	108-86-1	
Bromochloromethane	ND	ug/L	1.0	1		03/07/08 18:27	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	1		03/07/08 18:27	75-27-4	
Bromoform	ND	ug/L	1.0	1		03/07/08 18:27	75-25-2	
Bromomethane	ND	ug/L	1.0	1		03/07/08 18:27	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		03/07/08 18:27	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	1		03/07/08 18:27	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	1		03/07/08 18:27	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	1		03/07/08 18:27	98-06-6	
Carbon disulfide	ND	ug/L	5.0	1		03/07/08 18:27	75-15-0	
Carbon tetrachloride	ND	ug/L	1.0	1		03/07/08 18:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		03/07/08 18:27	108-90-7	
Chloroethane	1.4	ug/L	1.0	1		03/07/08 18:27	75-00-3	
Chloroform	ND	ug/L	1.0	1		03/07/08 18:27	67-66-3	
Chloromethane	ND	ug/L	1.0	1		03/07/08 18:27	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	1		03/07/08 18:27	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	1		03/07/08 18:27	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	2.5	1		03/07/08 18:27	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	1		03/07/08 18:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	1		03/07/08 18:27	106-93-4	
Dibromomethane	ND	ug/L	1.0	1		03/07/08 18:27	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 18:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 18:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		03/07/08 18:27	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	1		03/07/08 18:27	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	1		03/07/08 18:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		03/07/08 18:27	107-06-2	
1,2-Dichloroethene (Total)	440	ug/L	10.0	10		03/09/08 21:35	540-59-0	
1,1-Dichloroethene	ND	ug/L	1.0	1		03/07/08 18:27	75-35-4	
cis-1,2-Dichloroethene	302	ug/L	10.0	10		03/09/08 21:35	156-59-2	
trans-1,2-Dichloroethene	139	ug/L	10.0	10		03/09/08 21:35	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		03/07/08 18:27	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	1		03/07/08 18:27	142-28-9	
2,2-Dichloropropane	ND	ug/L	1.0	1		03/07/08 18:27	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	1		03/07/08 18:27	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		03/07/08 18:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		03/07/08 18:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		03/07/08 18:27	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	1		03/07/08 18:27	87-68-3	
2-Hexanone	ND	ug/L	10.0	1		03/07/08 18:27	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	1		03/07/08 18:27	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	1		03/07/08 18:27	99-87-6	
Methylene chloride	ND	ug/L	1.0	1		03/07/08 18:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		03/07/08 18:27	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		03/07/08 18:27	1634-04-4	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE
Pace Project No.: 6036442

Sample: DP-8/GW01		Lab ID: 6036442018	Collected: 03/04/08 13:53	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Naphthalene	ND	ug/L	10.0	1		03/07/08 18:27	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	1		03/07/08 18:27	103-65-1	
Styrene	ND	ug/L	1.0	1		03/07/08 18:27	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	1		03/07/08 18:27	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		03/07/08 18:27	79-34-5	
Tetrachloroethene	178	ug/L	10.0	10		03/09/08 21:35	127-18-4	
Toluene	ND	ug/L	1.0	1		03/07/08 18:27	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	1		03/07/08 18:27	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	1		03/07/08 18:27	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		03/07/08 18:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		03/07/08 18:27	79-00-5	
Trichloroethene	103	ug/L	1.0	1		03/07/08 18:27	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		03/07/08 18:27	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.5	1		03/07/08 18:27	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	1		03/07/08 18:27	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	1		03/07/08 18:27	108-67-8	
Vinyl chloride	2.3	ug/L	1.0	1		03/07/08 18:27	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		03/07/08 18:27	1330-20-7	
4-Bromofluorobenzene (S)	99	%	85-119	1		03/07/08 18:27	460-00-4	
Dibromofluoromethane (S)	101	%	85-114	1		03/07/08 18:27	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	81-118	1		03/07/08 18:27	17060-07-0	
Toluene-d8 (S)	98	%	82-114	1		03/07/08 18:27	2037-26-5	
Preservation pH	1.0		0.10	1		03/07/08 18:27		

ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-6/SB02 Lab ID: 6036442019 Collected: 03/04/08 14:13 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	24.2	1		03/12/08 08:47	67-64-1	
Benzene	ND	ug/kg	6.0	1		03/12/08 08:47	71-43-2	
Bromobenzene	ND	ug/kg	6.0	1		03/12/08 08:47	108-86-1	
Bromochloromethane	ND	ug/kg	6.0	1		03/12/08 08:47	74-97-5	
Bromodichloromethane	ND	ug/kg	6.0	1		03/12/08 08:47	75-27-4	
Bromoform	ND	ug/kg	6.0	1		03/12/08 08:47	75-25-2	
Bromomethane	ND	ug/kg	6.0	1		03/12/08 08:47	74-83-9	
2-Butanone (MEK)	ND	ug/kg	12.1	1		03/12/08 08:47	78-93-3	
n-Butylbenzene	ND	ug/kg	6.0	1		03/12/08 08:47	104-51-8	
sec-Butylbenzene	ND	ug/kg	6.0	1		03/12/08 08:47	135-98-8	
tert-Butylbenzene	ND	ug/kg	6.0	1		03/12/08 08:47	98-06-6	
Carbon disulfide	ND	ug/kg	6.0	1		03/12/08 08:47	75-15-0	
Carbon tetrachloride	ND	ug/kg	6.0	1		03/12/08 08:47	56-23-5	
Chlorobenzene	ND	ug/kg	6.0	1		03/12/08 08:47	108-90-7	
Chloroethane	ND	ug/kg	6.0	1		03/12/08 08:47	75-00-3	
Chloroform	ND	ug/kg	6.0	1		03/12/08 08:47	67-66-3	
Chloromethane	ND	ug/kg	6.0	1		03/12/08 08:47	74-87-3	
2-Chlorotoluene	ND	ug/kg	6.0	1		03/12/08 08:47	95-49-8	
4-Chlorotoluene	ND	ug/kg	6.0	1		03/12/08 08:47	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	12.1	1		03/12/08 08:47	96-12-8	
Dibromochloromethane	ND	ug/kg	6.0	1		03/12/08 08:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	6.0	1		03/12/08 08:47	106-93-4	
Dibromomethane	ND	ug/kg	6.0	1		03/12/08 08:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	6.0	1		03/12/08 08:47	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	6.0	1		03/12/08 08:47	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	6.0	1		03/12/08 08:47	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	6.0	1		03/12/08 08:47	75-71-8	
1,1-Dichloroethane	ND	ug/kg	6.0	1		03/12/08 08:47	75-34-3	
1,2-Dichloroethane	ND	ug/kg	6.0	1		03/12/08 08:47	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	6.0	1		03/12/08 08:47	540-59-0	
1,1-Dichloroethene	ND	ug/kg	6.0	1		03/12/08 08:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	6.0	1		03/12/08 08:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	6.0	1		03/12/08 08:47	156-60-5	
1,2-Dichloropropane	ND	ug/kg	6.0	1		03/12/08 08:47	78-87-5	
1,3-Dichloropropane	ND	ug/kg	6.0	1		03/12/08 08:47	142-28-9	
2,2-Dichloropropane	ND	ug/kg	6.0	1		03/12/08 08:47	594-20-7	
1,1-Dichloropropene	ND	ug/kg	6.0	1		03/12/08 08:47	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	6.0	1		03/12/08 08:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	6.0	1		03/12/08 08:47	10061-02-6	
Ethylbenzene	ND	ug/kg	6.0	1		03/12/08 08:47	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	6.0	1		03/12/08 08:47	87-68-3	
2-Hexanone	ND	ug/kg	24.2	1		03/12/08 08:47	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	6.0	1		03/12/08 08:47	98-82-8	
p-Isopropyltoluene	ND	ug/kg	6.0	1		03/12/08 08:47	99-87-6	
Methylene chloride	ND	ug/kg	6.0	1		03/12/08 08:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	12.1	1		03/12/08 08:47	108-10-1	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE
Pace Project No.: 6036442

Sample: DP-6/SB02 Lab ID: 6036442019 Collected: 03/04/08 14:13 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA								
Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	6.0	1		03/12/08 08:47	1634-04-4	
Naphthalene	ND	ug/kg	12.1	1		03/12/08 08:47	91-20-3	
n-Propylbenzene	ND	ug/kg	6.0	1		03/12/08 08:47	103-65-1	
Styrene	ND	ug/kg	6.0	1		03/12/08 08:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	6.0	1		03/12/08 08:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	6.0	1		03/12/08 08:47	79-34-5	
Tetrachloroethene	291	ug/kg	6.0	1		03/12/08 08:47	127-18-4	
Toluene	ND	ug/kg	6.0	1		03/12/08 08:47	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	6.0	1		03/12/08 08:47	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	6.0	1		03/12/08 08:47	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	6.0	1		03/12/08 08:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	6.0	1		03/12/08 08:47	79-00-5	
Trichloroethene	ND	ug/kg	6.0	1		03/12/08 08:47	79-01-6	
Trichlorofluoromethane	ND	ug/kg	6.0	1		03/12/08 08:47	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	6.0	1		03/12/08 08:47	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	6.0	1		03/12/08 08:47	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	6.0	1		03/12/08 08:47	108-67-8	
Vinyl chloride	ND	ug/kg	6.0	1		03/12/08 08:47	75-01-4	
Xylene (Total)	ND	ug/kg	6.0	1		03/12/08 08:47	1330-20-7	
Dibromofluoromethane (S)	94 %		82-119	1		03/12/08 08:47	1868-53-7	
Toluene-d8 (S)	93 %		76-120	1		03/12/08 08:47	2037-26-5	
4-Bromofluorobenzene (S)	92 %		71-124	1		03/12/08 08:47	460-00-4	
1,2-Dichloroethane-d4 (S)	92 %		82-125	1		03/12/08 08:47	17060-07-0	
Percent Moisture								
Analytical Method: ASTM D2974-87								
Percent Moisture	17.4 %		0.10	1		03/10/08 00:00		

ANALYTICAL RESULTS

Project: NPPC FT DODGE
Pace Project No.: 6036442

Sample: DP-6/GW01		Lab ID: 6036442020	Collected: 03/04/08 14:30	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Acetone	ND	ug/L	50.0	5		03/07/08 18:43	67-64-1	
Benzene	ND	ug/L	5.0	5		03/07/08 18:43	71-43-2	
Bromobenzene	ND	ug/L	5.0	5		03/07/08 18:43	108-86-1	
Bromochloromethane	ND	ug/L	5.0	5		03/07/08 18:43	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	5		03/07/08 18:43	75-27-4	
Bromoform	ND	ug/L	5.0	5		03/07/08 18:43	75-25-2	
Bromomethane	ND	ug/L	5.0	5		03/07/08 18:43	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	5		03/07/08 18:43	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	5		03/07/08 18:43	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	5		03/07/08 18:43	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	5		03/07/08 18:43	98-06-6	
Carbon disulfide	ND	ug/L	25.0	5		03/07/08 18:43	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	5		03/07/08 18:43	56-23-5	
Chlorobenzene	ND	ug/L	5.0	5		03/07/08 18:43	108-90-7	
Chloroethane	ND	ug/L	5.0	5		03/07/08 18:43	75-00-3	
Chloroform	ND	ug/L	5.0	5		03/07/08 18:43	67-66-3	
Chloromethane	ND	ug/L	5.0	5		03/07/08 18:43	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	5		03/07/08 18:43	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	5		03/07/08 18:43	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	12.5	5		03/07/08 18:43	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	5		03/07/08 18:43	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	5		03/07/08 18:43	106-93-4	
Dibromomethane	ND	ug/L	5.0	5		03/07/08 18:43	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 18:43	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 18:43	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 18:43	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	5		03/07/08 18:43	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	5		03/07/08 18:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	5		03/07/08 18:43	107-06-2	
1,2-Dichloroethene (Total)	7.0	ug/L	5.0	5		03/09/08 21:51	540-59-0	
1,1-Dichloroethene	ND	ug/L	5.0	5		03/07/08 18:43	75-35-4	
cis-1,2-Dichloroethene	7.0	ug/L	5.0	5		03/09/08 21:51	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	5		03/09/08 21:51	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	5		03/07/08 18:43	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	5		03/07/08 18:43	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	5		03/07/08 18:43	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	5		03/07/08 18:43	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	5		03/07/08 18:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	5		03/07/08 18:43	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	5		03/07/08 18:43	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	5		03/07/08 18:43	87-68-3	
2-Hexanone	ND	ug/L	50.0	5		03/07/08 18:43	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	5		03/07/08 18:43	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	5		03/07/08 18:43	99-87-6	
Methylene chloride	ND	ug/L	5.0	5		03/07/08 18:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	5		03/07/08 18:43	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	5		03/07/08 18:43	1634-04-4	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE
Pace Project No.: 6036442

Sample: DP-6/GW01		Lab ID: 6036442020	Collected: 03/04/08 14:30	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Naphthalene	ND	ug/L	50.0	5		03/07/08 18:43	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	5		03/07/08 18:43	103-65-1	
Styrene	ND	ug/L	5.0	5		03/07/08 18:43	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	5		03/07/08 18:43	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		03/07/08 18:43	79-34-5	
Tetrachloroethene	1040	ug/L	5.0	5		03/07/08 18:43	127-18-4	
Toluene	ND	ug/L	5.0	5		03/07/08 18:43	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	5		03/07/08 18:43	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	5		03/07/08 18:43	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	5		03/07/08 18:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	5		03/07/08 18:43	79-00-5	
Trichloroethene	37.9	ug/L	5.0	5		03/07/08 18:43	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	5		03/07/08 18:43	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	12.5	5		03/07/08 18:43	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	5		03/07/08 18:43	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	5		03/07/08 18:43	108-67-8	
Vinyl chloride	ND	ug/L	5.0	5		03/07/08 18:43	75-01-4	
Xylene (Total)	ND	ug/L	15.0	5		03/07/08 18:43	1330-20-7	
4-Bromofluorobenzene (S)	97	%	85-119	5		03/07/08 18:43	460-00-4	
Dibromofluoromethane (S)	104	%	85-114	5		03/07/08 18:43	1868-53-7	
1,2-Dichloroethane-d4 (S)	104	%	81-118	5		03/07/08 18:43	17060-07-0	
Toluene-d8 (S)	99	%	82-114	5		03/07/08 18:43	2037-26-5	
Preservation pH	1.0		0.10	5		03/07/08 18:43		

ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-5/SB01 Lab ID: 6036442021 Collected: 03/04/08 14:42 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	22.7	1		03/12/08 09:04	67-64-1	
Benzene	ND	ug/kg	5.7	1		03/12/08 09:04	71-43-2	
Bromobenzene	ND	ug/kg	5.7	1		03/12/08 09:04	108-86-1	
Bromochloromethane	ND	ug/kg	5.7	1		03/12/08 09:04	74-97-5	
Bromodichloromethane	ND	ug/kg	5.7	1		03/12/08 09:04	75-27-4	
Bromoform	ND	ug/kg	5.7	1		03/12/08 09:04	75-25-2	
Bromomethane	ND	ug/kg	5.7	1		03/12/08 09:04	74-83-9	
2-Butanone (MEK)	ND	ug/kg	11.3	1		03/12/08 09:04	78-93-3	
n-Butylbenzene	ND	ug/kg	5.7	1		03/12/08 09:04	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.7	1		03/12/08 09:04	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.7	1		03/12/08 09:04	98-06-6	
Carbon disulfide	ND	ug/kg	5.7	1		03/12/08 09:04	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.7	1		03/12/08 09:04	56-23-5	
Chlorobenzene	ND	ug/kg	5.7	1		03/12/08 09:04	108-90-7	
Chloroethane	ND	ug/kg	5.7	1		03/12/08 09:04	75-00-3	
Chloroform	ND	ug/kg	5.7	1		03/12/08 09:04	67-66-3	
Chloromethane	ND	ug/kg	5.7	1		03/12/08 09:04	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.7	1		03/12/08 09:04	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.7	1		03/12/08 09:04	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	11.3	1		03/12/08 09:04	96-12-8	
Dibromochloromethane	ND	ug/kg	5.7	1		03/12/08 09:04	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.7	1		03/12/08 09:04	106-93-4	
Dibromomethane	ND	ug/kg	5.7	1		03/12/08 09:04	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.7	1		03/12/08 09:04	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.7	1		03/12/08 09:04	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.7	1		03/12/08 09:04	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	5.7	1		03/12/08 09:04	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.7	1		03/12/08 09:04	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.7	1		03/12/08 09:04	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.7	1		03/12/08 09:04	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.7	1		03/12/08 09:04	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.7	1		03/12/08 09:04	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.7	1		03/12/08 09:04	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.7	1		03/12/08 09:04	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.7	1		03/12/08 09:04	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.7	1		03/12/08 09:04	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.7	1		03/12/08 09:04	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.7	1		03/12/08 09:04	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.7	1		03/12/08 09:04	10061-02-6	
Ethylbenzene	ND	ug/kg	5.7	1		03/12/08 09:04	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.7	1		03/12/08 09:04	87-68-3	
2-Hexanone	ND	ug/kg	22.7	1		03/12/08 09:04	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.7	1		03/12/08 09:04	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.7	1		03/12/08 09:04	99-87-6	
Methylene chloride	ND	ug/kg	5.7	1		03/12/08 09:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	11.3	1		03/12/08 09:04	108-10-1	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-5/SB01 Lab ID: 6036442021 Collected: 03/04/08 14:42 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/kg	5.7	1		03/12/08 09:04	1634-04-4	
Naphthalene	ND	ug/kg	11.3	1		03/12/08 09:04	91-20-3	
n-Propylbenzene	ND	ug/kg	5.7	1		03/12/08 09:04	103-65-1	
Styrene	ND	ug/kg	5.7	1		03/12/08 09:04	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.7	1		03/12/08 09:04	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.7	1		03/12/08 09:04	79-34-5	
1,1,2,2-Tetrachloroethane	16.7	ug/kg	5.7	1		03/12/08 09:04	127-18-4	
Toluene	ND	ug/kg	5.7	1		03/12/08 09:04	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.7	1		03/12/08 09:04	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.7	1		03/12/08 09:04	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.7	1		03/12/08 09:04	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.7	1		03/12/08 09:04	79-00-5	
Trichloroethene	ND	ug/kg	5.7	1		03/12/08 09:04	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.7	1		03/12/08 09:04	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.7	1		03/12/08 09:04	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.7	1		03/12/08 09:04	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.7	1		03/12/08 09:04	108-67-8	
Vinyl chloride	ND	ug/kg	5.7	1		03/12/08 09:04	75-01-4	
Xylene (Total)	ND	ug/kg	5.7	1		03/12/08 09:04	1330-20-7	
Dibromofluoromethane (S)	107	%	82-119	1		03/12/08 09:04	1868-53-7	
Toluene-d8 (S)	98	%	76-120	1		03/12/08 09:04	2037-26-5	
4-Bromofluorobenzene (S)	100	%	71-124	1		03/12/08 09:04	460-00-4	
1,2-Dichloroethane-d4 (S)	92	%	82-125	1		03/12/08 09:04	17060-07-0	
Percent Moisture Analytical Method: ASTM D2974-87								
Percent Moisture	12.7	%	0.10	1		03/10/08 00:00		

ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-5/GW01 Lab ID: 6036442022 Collected: 03/04/08 14:55 Received: 03/05/08 17:02 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	50.0	5		03/07/08 19:00	67-64-1	
Benzene	ND	ug/L	5.0	5		03/07/08 19:00	71-43-2	
Bromobenzene	ND	ug/L	5.0	5		03/07/08 19:00	108-86-1	
Bromochloromethane	ND	ug/L	5.0	5		03/07/08 19:00	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	5		03/07/08 19:00	75-27-4	
Bromoform	ND	ug/L	5.0	5		03/07/08 19:00	75-25-2	
Bromomethane	ND	ug/L	5.0	5		03/07/08 19:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	5		03/07/08 19:00	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	5		03/07/08 19:00	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	5		03/07/08 19:00	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	5		03/07/08 19:00	98-06-6	
Carbon disulfide	ND	ug/L	25.0	5		03/07/08 19:00	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	5		03/07/08 19:00	56-23-5	
Chlorobenzene	ND	ug/L	5.0	5		03/07/08 19:00	108-90-7	
Chloroethane	ND	ug/L	5.0	5		03/07/08 19:00	75-00-3	
Chloroform	ND	ug/L	5.0	5		03/07/08 19:00	67-66-3	
Chloromethane	ND	ug/L	5.0	5		03/07/08 19:00	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	5		03/07/08 19:00	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	5		03/07/08 19:00	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	12.5	5		03/07/08 19:00	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	5		03/07/08 19:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	5		03/07/08 19:00	106-93-4	
Dibromomethane	ND	ug/L	5.0	5		03/07/08 19:00	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 19:00	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 19:00	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 19:00	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	5		03/07/08 19:00	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	5		03/07/08 19:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	5		03/07/08 19:00	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	5.0	5		03/07/08 19:00	540-59-0	
1,1-Dichloroethene	ND	ug/L	5.0	5		03/07/08 19:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	5		03/07/08 19:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	5		03/07/08 19:00	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	5		03/07/08 19:00	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	5		03/07/08 19:00	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	5		03/07/08 19:00	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	5		03/07/08 19:00	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	5		03/07/08 19:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	5		03/07/08 19:00	10061-02-6	
Ethylbenzene	ND	ug/L	5.0	5		03/07/08 19:00	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	5		03/07/08 19:00	87-68-3	
2-Hexanone	ND	ug/L	50.0	5		03/07/08 19:00	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	5		03/07/08 19:00	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	5		03/07/08 19:00	99-87-6	
Methylene chloride	ND	ug/L	5.0	5		03/07/08 19:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	5		03/07/08 19:00	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	5		03/07/08 19:00	1634-04-4	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-5/GW01		Lab ID: 6036442022	Collected: 03/04/08 14:55	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Naphthalene	ND	ug/L	50.0	5		03/07/08 19:00	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	5		03/07/08 19:00	103-65-1	
Styrene	ND	ug/L	5.0	5		03/07/08 19:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	5		03/07/08 19:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		03/07/08 19:00	79-34-5	
1,1,2,2-Tetrachloroethene	248	ug/L	5.0	5		03/07/08 19:00	127-18-4	
Toluene	ND	ug/L	5.0	5		03/07/08 19:00	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	5		03/07/08 19:00	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	5		03/07/08 19:00	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	5		03/07/08 19:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	5		03/07/08 19:00	79-00-5	
Trichloroethene	ND	ug/L	5.0	5		03/07/08 19:00	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	5		03/07/08 19:00	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	12.5	5		03/07/08 19:00	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	5		03/07/08 19:00	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	5		03/07/08 19:00	108-67-8	
Vinyl chloride	ND	ug/L	5.0	5		03/07/08 19:00	75-01-4	
Xylene (Total)	ND	ug/L	15.0	5		03/07/08 19:00	1330-20-7	
4-Bromofluorobenzene (S)	98	%	85-119	5		03/07/08 19:00	460-00-4	
Dibromofluoromethane (S)	104	%	85-114	5		03/07/08 19:00	1868-53-7	
1,2-Dichloroethane-d4 (S)	101	%	81-118	5		03/07/08 19:00	17060-07-0	
Toluene-d8 (S)	99	%	82-114	5		03/07/08 19:00	2037-26-5	
Preservation pH	1.0		0.10	5		03/07/08 19:00		

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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-7/SB03 Lab ID: 6036442023 Collected: 03/04/08 15:13 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Acetone	ND	ug/kg	23.4	1		03/12/08 09:21	67-64-1	
Benzene	ND	ug/kg	5.8	1		03/12/08 09:21	71-43-2	
Bromobenzene	ND	ug/kg	5.8	1		03/12/08 09:21	108-86-1	
Bromochloromethane	ND	ug/kg	5.8	1		03/12/08 09:21	74-97-5	
Bromodichloromethane	ND	ug/kg	5.8	1		03/12/08 09:21	75-27-4	
Bromoform	ND	ug/kg	5.8	1		03/12/08 09:21	75-25-2	
Bromomethane	ND	ug/kg	5.8	1		03/12/08 09:21	74-83-9	
2-Butanone (MEK)	ND	ug/kg	11.7	1		03/12/08 09:21	78-93-3	
n-Butylbenzene	ND	ug/kg	5.8	1		03/12/08 09:21	104-51-8	
sec-Butylbenzene	ND	ug/kg	5.8	1		03/12/08 09:21	135-98-8	
tert-Butylbenzene	ND	ug/kg	5.8	1		03/12/08 09:21	98-06-6	
Carbon disulfide	ND	ug/kg	5.8	1		03/12/08 09:21	75-15-0	
Carbon tetrachloride	ND	ug/kg	5.8	1		03/12/08 09:21	56-23-5	
Chlorobenzene	ND	ug/kg	5.8	1		03/12/08 09:21	108-90-7	
Chloroethane	ND	ug/kg	5.8	1		03/12/08 09:21	75-00-3	
Chloroform	ND	ug/kg	5.8	1		03/12/08 09:21	67-66-3	
Chloromethane	ND	ug/kg	5.8	1		03/12/08 09:21	74-87-3	
2-Chlorotoluene	ND	ug/kg	5.8	1		03/12/08 09:21	95-49-8	
4-Chlorotoluene	ND	ug/kg	5.8	1		03/12/08 09:21	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/kg	11.7	1		03/12/08 09:21	96-12-8	
Dibromochloromethane	ND	ug/kg	5.8	1		03/12/08 09:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/kg	5.8	1		03/12/08 09:21	106-93-4	
Dibromomethane	ND	ug/kg	5.8	1		03/12/08 09:21	74-95-3	
1,2-Dichlorobenzene	ND	ug/kg	5.8	1		03/12/08 09:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/kg	5.8	1		03/12/08 09:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/kg	5.8	1		03/12/08 09:21	106-46-7	
Dichlorodifluoromethane	ND	ug/kg	5.8	1		03/12/08 09:21	75-71-8	
1,1-Dichloroethane	ND	ug/kg	5.8	1		03/12/08 09:21	75-34-3	
1,2-Dichloroethane	ND	ug/kg	5.8	1		03/12/08 09:21	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/kg	5.8	1		03/12/08 09:21	540-59-0	
1,1-Dichloroethene	ND	ug/kg	5.8	1		03/12/08 09:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/kg	5.8	1		03/12/08 09:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/kg	5.8	1		03/12/08 09:21	156-60-5	
1,2-Dichloropropane	ND	ug/kg	5.8	1		03/12/08 09:21	78-87-5	
1,3-Dichloropropane	ND	ug/kg	5.8	1		03/12/08 09:21	142-28-9	
2,2-Dichloropropane	ND	ug/kg	5.8	1		03/12/08 09:21	594-20-7	
1,1-Dichloropropene	ND	ug/kg	5.8	1		03/12/08 09:21	563-58-6	
cis-1,3-Dichloropropene	ND	ug/kg	5.8	1		03/12/08 09:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/kg	5.8	1		03/12/08 09:21	10061-02-6	
Ethylbenzene	ND	ug/kg	5.8	1		03/12/08 09:21	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/kg	5.8	1		03/12/08 09:21	87-68-3	
2-Hexanone	ND	ug/kg	23.4	1		03/12/08 09:21	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/kg	5.8	1		03/12/08 09:21	98-82-8	
p-Isopropyltoluene	ND	ug/kg	5.8	1		03/12/08 09:21	99-87-6	
Methylene chloride	ND	ug/kg	5.8	1		03/12/08 09:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/kg	11.7	1		03/12/08 09:21	108-10-1	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-7/SB03 Lab ID: 6036442023 Collected: 03/04/08 15:13 Received: 03/05/08 17:02 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035A VOA		Analytical Method: EPA 8260						
Methyl-tert-butyl ether	ND	ug/kg	5.8	1		03/12/08 09:21	1634-04-4	
Naphthalene	ND	ug/kg	11.7	1		03/12/08 09:21	91-20-3	
n-Propylbenzene	ND	ug/kg	5.8	1		03/12/08 09:21	103-65-1	
Styrene	ND	ug/kg	5.8	1		03/12/08 09:21	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/kg	5.8	1		03/12/08 09:21	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/kg	5.8	1		03/12/08 09:21	79-34-5	
Tetrachloroethene	ND	ug/kg	5.8	1		03/12/08 09:21	127-18-4	
Toluene	ND	ug/kg	5.8	1		03/12/08 09:21	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/kg	5.8	1		03/12/08 09:21	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/kg	5.8	1		03/12/08 09:21	120-82-1	
1,1,1-Trichloroethane	ND	ug/kg	5.8	1		03/12/08 09:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/kg	5.8	1		03/12/08 09:21	79-00-5	
Trichloroethene	ND	ug/kg	5.8	1		03/12/08 09:21	79-01-6	
Trichlorofluoromethane	ND	ug/kg	5.8	1		03/12/08 09:21	75-69-4	
1,2,3-Trichloropropane	ND	ug/kg	5.8	1		03/12/08 09:21	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/kg	5.8	1		03/12/08 09:21	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/kg	5.8	1		03/12/08 09:21	108-67-8	
Vinyl chloride	ND	ug/kg	5.8	1		03/12/08 09:21	75-01-4	
Xylene (Total)	ND	ug/kg	5.8	1		03/12/08 09:21	1330-20-7	
Dibromofluoromethane (S)	96 %		82-119	1		03/12/08 09:21	1868-53-7	
Toluene-d8 (S)	92 %		76-120	1		03/12/08 09:21	2037-26-5	
4-Bromofluorobenzene (S)	78 %		71-124	1		03/12/08 09:21	460-00-4	
1,2-Dichloroethane-d4 (S)	95 %		82-125	1		03/12/08 09:21	17060-07-0	
Percent Moisture		Analytical Method: ASTM D2974-87						
Percent Moisture	15.6 %		0.10	1		03/10/08 00:00		

ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-7/GW01		Lab ID: 6036442024	Collected: 03/04/08 15:24	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Acetone	ND	ug/L	50.0	5		03/07/08 19:16	67-64-1	
Benzene	ND	ug/L	5.0	5		03/07/08 19:16	71-43-2	
Bromobenzene	ND	ug/L	5.0	5		03/07/08 19:16	108-86-1	
Bromochloromethane	ND	ug/L	5.0	5		03/07/08 19:16	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	5		03/07/08 19:16	75-27-4	
Bromoform	ND	ug/L	5.0	5		03/07/08 19:16	75-25-2	
Bromomethane	ND	ug/L	5.0	5		03/07/08 19:16	74-83-9	
2-Butanone (MEK)	ND	ug/L	50.0	5		03/07/08 19:16	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	5		03/07/08 19:16	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	5		03/07/08 19:16	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	5		03/07/08 19:16	98-06-6	
Carbon disulfide	ND	ug/L	25.0	5		03/07/08 19:16	75-15-0	
Carbon tetrachloride	ND	ug/L	5.0	5		03/07/08 19:16	56-23-5	
Chlorobenzene	ND	ug/L	5.0	5		03/07/08 19:16	108-90-7	
Chloroethane	ND	ug/L	5.0	5		03/07/08 19:16	75-00-3	
Chloroform	ND	ug/L	5.0	5		03/07/08 19:16	67-66-3	
Chloromethane	ND	ug/L	5.0	5		03/07/08 19:16	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	5		03/07/08 19:16	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	5		03/07/08 19:16	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	12.5	5		03/07/08 19:16	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	5		03/07/08 19:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	5		03/07/08 19:16	106-93-4	
Dibromomethane	ND	ug/L	5.0	5		03/07/08 19:16	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 19:16	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 19:16	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	5		03/07/08 19:16	106-46-7	
Dichlorodifluoromethane	ND	ug/L	5.0	5		03/07/08 19:16	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	5		03/07/08 19:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	5		03/07/08 19:16	107-06-2	
1,2-Dichloroethene (Total)	ND	ug/L	5.0	5		03/07/08 19:16	540-59-0	
1,1-Dichloroethene	ND	ug/L	5.0	5		03/07/08 19:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	5		03/07/08 19:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	5		03/07/08 19:16	156-60-5	
1,2-Dichloropropane	ND	ug/L	5.0	5		03/07/08 19:16	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	5		03/07/08 19:16	142-28-9	
2,2-Dichloropropane	ND	ug/L	5.0	5		03/07/08 19:16	594-20-7	
1,1-Dichloropropene	ND	ug/L	5.0	5		03/07/08 19:16	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	5.0	5		03/07/08 19:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	5.0	5		03/07/08 19:16	10061-02-8	
Ethylbenzene	ND	ug/L	5.0	5		03/07/08 19:16	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	5		03/07/08 19:16	87-68-3	
2-Hexanone	ND	ug/L	50.0	5		03/07/08 19:16	591-78-6	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	5		03/07/08 19:16	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	5		03/07/08 19:16	99-87-6	
Methylene chloride	ND	ug/L	5.0	5		03/07/08 19:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	5		03/07/08 19:16	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	5		03/07/08 19:16	1634-04-4	

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ANALYTICAL RESULTS

Project: NPPC FT DODGE

Pace Project No.: 6036442

Sample: DP-7/GW01		Lab ID: 6036442024	Collected: 03/04/08 15:24	Received: 03/05/08 17:02	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV		Analytical Method: EPA 5030B/8260						
Naphthalene	ND	ug/L	50.0	5		03/07/08 19:16	91-20-3	
n-Propylbenzene	ND	ug/L	5.0	5		03/07/08 19:16	103-65-1	
Styrene	ND	ug/L	5.0	5		03/07/08 19:16	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	5		03/07/08 19:16	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	5		03/07/08 19:16	79-34-5	
1,1,2,2-Tetrachloroethene	511	ug/L	5.0	5		03/07/08 19:16	127-18-4	
Toluene	ND	ug/L	5.0	5		03/07/08 19:16	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	5		03/07/08 19:16	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	5		03/07/08 19:16	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	5		03/07/08 19:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	5		03/07/08 19:16	79-00-5	
Trichloroethene	ND	ug/L	5.0	5		03/07/08 19:16	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	5		03/07/08 19:16	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	12.5	5		03/07/08 19:16	96-18-4	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	5		03/07/08 19:16	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	5		03/07/08 19:16	108-67-8	
Vinyl chloride	ND	ug/L	5.0	5		03/07/08 19:16	75-01-4	
Xylene (Total)	ND	ug/L	15.0	5		03/07/08 19:16	1330-20-7	
4-Bromofluorobenzene (S)	98	%	85-119	5		03/07/08 19:16	460-00-4	2e
Dibromofluoromethane (S)	99	%	85-114	5		03/07/08 19:16	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	81-118	5		03/07/08 19:16	17060-07-0	
Toluene-d8 (S)	99	%	82-114	5		03/07/08 19:16	2037-26-5	
Preservation pH	1.0		0.10	5		03/07/08 19:16		

QUALITY CONTROL DATA

Project: NPPC FT DODGE

Pace Project No.: 6036442

QC Batch: PMST/2918

Analysis Method: ASTM D2974-87

QC Batch Method: ASTM D2974-87

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 6036442002, 6036442003, 6036442005

SAMPLE DUPLICATE: 295643

Parameter	Units	6036299018 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	45.0	44.1	2	20	

QUALITY CONTROL DATA

Project: NPPC FT DODGE

Pace Project No.: 6036442

QC Batch:	MSV/13303	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 5030B/8260	Analysis Description:	8260 MSV Water 10 mL Purge
Associated Lab Samples:	6036442001, 6036442004, 6036442006, 6036442007, 6036442009, 6036442011, 6036442013, 6036442015, 6036442018, 6036442020, 6036442022, 6036442024		

METHOD BLANK: 295811

Associated Lab Samples: 6036442001, 6036442004, 6036442006, 6036442007, 6036442009, 6036442011, 6036442013, 6036442015, 6036442018, 6036442020, 6036442022, 6036442024

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	
1,1,1-Trichloroethane	ug/L	ND	1.0	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	
1,1,2-Trichloroethane	ug/L	ND	1.0	
1,1-Dichloroethane	ug/L	ND	1.0	
1,1-Dichloroethene	ug/L	ND	1.0	
1,1-Dichloropropene	ug/L	ND	1.0	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	
1,2,3-Trichloropropane	ug/L	ND	2.5	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	
1,2-Dibromo-3-chloropropane	ug/L	ND	2.5	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	
1,2-Dichlorobenzene	ug/L	ND	1.0	
1,2-Dichloroethane	ug/L	ND	1.0	
1,2-Dichloroethene (Total)	ug/L	ND	1.0	
1,2-Dichloropropane	ug/L	ND	1.0	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	
1,3-Dichlorobenzene	ug/L	ND	1.0	
1,3-Dichloropropane	ug/L	ND	1.0	
1,4-Dichlorobenzene	ug/L	ND	1.0	
2,2-Dichloropropane	ug/L	ND	1.0	
2-Butanone (MEK)	ug/L	ND	10.0	
2-Chlorotoluene	ug/L	ND	1.0	
2-Hexanone	ug/L	ND	10.0	
4-Chlorotoluene	ug/L	ND	1.0	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	
Acetone	ug/L	ND	10.0	
Benzene	ug/L	ND	1.0	
Bromobenzene	ug/L	ND	1.0	
Bromochloromethane	ug/L	ND	1.0	
Bromodichloromethane	ug/L	ND	1.0	
Bromoform	ug/L	ND	1.0	
Bromomethane	ug/L	ND	1.0	
Carbon disulfide	ug/L	ND	5.0	
Carbon tetrachloride	ug/L	ND	1.0	
Chlorobenzene	ug/L	ND	1.0	
Chloroethane	ug/L	ND	1.0	
Chloroform	ug/L	ND	1.0	
Chloromethane	ug/L	ND	1.0	
cis-1,2-Dichloroethene	ug/L	ND	1.0	

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QUALITY CONTROL DATA

Project: NPPC FT DODGE

Pace Project No.: 6036442

METHOD BLANK: 295811

Associated Lab Samples: 6036442001, 6036442004, 6036442006, 6036442007, 6036442009, 6036442011, 6036442013, 6036442015, 6036442018, 6036442020, 6036442022, 6036442024

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
cis-1,3-Dichloropropene	ug/L	ND	1.0	
Dibromochloromethane	ug/L	ND	1.0	
Dibromomethane	ug/L	ND	1.0	
Dichlorodifluoromethane	ug/L	ND	1.0	
Ethylbenzene	ug/L	ND	1.0	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	
Methyl-tert-butyl ether	ug/L	ND	1.0	
Methylene chloride	ug/L	ND	1.0	
n-Butylbenzene	ug/L	ND	1.0	
n-Propylbenzene	ug/L	ND	1.0	
Naphthalene	ug/L	ND	10.0	
p-Isopropyltoluene	ug/L	ND	1.0	
sec-Butylbenzene	ug/L	ND	1.0	
Styrene	ug/L	ND	1.0	
tert-Butylbenzene	ug/L	ND	1.0	
Tetrachloroethene	ug/L	ND	1.0	
Toluene	ug/L	ND	1.0	
trans-1,2-Dichloroethene	ug/L	ND	1.0	
trans-1,3-Dichloropropene	ug/L	ND	1.0	
Trichloroethene	ug/L	ND	1.0	
Trichlorofluoromethane	ug/L	ND	1.0	
Vinyl chloride	ug/L	ND	1.0	
Xylene (Total)	ug/L	ND	3.0	
1,2-Dichloroethane-d4 (S)	%	94	81-118	
4-Bromofluorobenzene (S)	%	100	85-119	
Dibromofluoromethane (S)	%	102	85-114	
Toluene-d8 (S)	%	101	82-114	

LABORATORY CONTROL SAMPLE: 295812

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	10	10.7	107	77-127	
1,1,1-Trichloroethane	ug/L	10	10.5	105	78-130	
1,1,2,2-Tetrachloroethane	ug/L	10	10.3	103	73-131	
1,1,2-Trichloroethane	ug/L	10	10.3	103	85-126	
1,1-Dichloroethane	ug/L	10	10.7	107	76-124	
1,1-Dichloroethene	ug/L	10	11.0	110	76-129	
1,1-Dichloropropene	ug/L	10	10.7	107	83-125	
1,2,3-Trichlorobenzene	ug/L	10	9.5	95	78-129	
1,2,3-Trichloropropane	ug/L	10	8.7	87	69-117	
1,2,4-Trichlorobenzene	ug/L	10	9.9	99	79-127	
1,2,4-Trimethylbenzene	ug/L	10	10.1	101	82-124	
1,2-Dibromo-3-chloropropane	ug/L	10	9.7	97	62-141	

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QUALITY CONTROL DATA

Project: NPPC FT DODGE

Pace Project No.: 6036442

LABORATORY CONTROL SAMPLE: 295812

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/L	10	10.6	106	85-124	
1,2-Dichlorobenzene	ug/L	10	10.3	103	85-123	
1,2-Dichloroethane	ug/L	10	10.0	100	77-129	
1,2-Dichloroethene (Total)	ug/L	20	22.0	110	81-127	
1,2-Dichloropropane	ug/L	10	10.4	104	82-121	
1,3,5-Trimethylbenzene	ug/L	10	9.9	99	85-122	
1,3-Dichlorobenzene	ug/L	10	10.3	103	84-121	
1,3-Dichloropropane	ug/L	10	10.3	103	86-121	
1,4-Dichlorobenzene	ug/L	10	10.4	104	83-121	
2,2-Dichloropropane	ug/L	10	10.5	105	47-154	
2-Butanone (MEK)	ug/L	20	19.8	99	64-126	
2-Chlorotoluene	ug/L	10	10.6	106	83-125	
2-Hexanone	ug/L	20	18.7	94	65-128	
4-Chlorotoluene	ug/L	10	10.5	105	84-121	
4-Methyl-2-pentanone (MIBK)	ug/L	20	17.5	87	64-121	
Acetone	ug/L	20	18.7	94	52-139	
Benzene	ug/L	10	10.0	100	87-117	
Bromobenzene	ug/L	10	10.5	105	83-126	
Bromochloromethane	ug/L	10	10.3	103	82-129	
Bromodichloromethane	ug/L	10	10.3	103	75-127	
Bromoform	ug/L	10	10.0	100	64-133	
Bromomethane	ug/L	10	10.4	104	21-188	
Carbon disulfide	ug/L	20	14.8	74	53-120	
Carbon tetrachloride	ug/L	10	10.5	105	76-131	
Chlorobenzene	ug/L	10	10.5	105	85-120	
Chloroethane	ug/L	10	10.9	109	69-126	
Chloroform	ug/L	10	10.2	102	79-126	
Chloromethane	ug/L	10	8.8	88	44-118	
cis-1,2-Dichloroethene	ug/L	10	10.8	108	79-128	
cis-1,3-Dichloropropene	ug/L	10	10.0	100	76-122	
Dibromochloromethane	ug/L	10	10.7	107	74-121	
Dibromomethane	ug/L	10	9.9	99	75-130	
Dichlorodifluoromethane	ug/L	10	7.9	79	12-132	
Ethylbenzene	ug/L	10	10.5	105	84-123	
Hexachloro-1,3-butadiene	ug/L	10	10.6	106	71-144	
Isopropylbenzene (Cumene)	ug/L	10	8.8	88	72-107	
Methyl-tert-butyl ether	ug/L	10	8.9	89	69-115	
Methylene chloride	ug/L	10	10.4	104	74-132	
n-Butylbenzene	ug/L	10	10	100	80-126	
n-Propylbenzene	ug/L	10	10.2	102	83-123	
Naphthalene	ug/L	10	8.7J	87	61-150	
p-Isopropyltoluene	ug/L	10	10.1	101	82-118	
sec-Butylbenzene	ug/L	10	10.2	102	84-121	
Styrene	ug/L	10	10.6	106	84-128	
tert-Butylbenzene	ug/L	10	10.1	101	83-124	
Tetrachloroethene	ug/L	10	10.9	109	83-126	
Toluene	ug/L	10	10	100	81-124	
trans-1,2-Dichloroethene	ug/L	10	11.2	112	80-130	

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QUALITY CONTROL DATA

Project: NPPC FT DODGE

Pace Project No.: 6036442

LABORATORY CONTROL SAMPLE: 295812

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
trans-1,3-Dichloropropene	ug/L	10	9.7	97	75-122	
Trichloroethene	ug/L	10	10.4	104	80-130	
Trichlorofluoromethane	ug/L	10	9.0	90	65-113	
Vinyl chloride	ug/L	10	10.0	100	59-124	
Xylene (Total)	ug/L	30	32.0	107	83-125	
1,2-Dichloroethane-d4 (S)	%			96	81-118	
4-Bromofluorobenzene (S)	%			99	85-119	
Dibromofluoromethane (S)	%			100	85-114	
Toluene-d8 (S)	%			99	82-114	

QUALITY CONTROL DATA

Project: NPPC FT DODGE
Pace Project No.: 6036442

QC Batch: PMST/2922 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 6036442008, 6036442010, 6036442012, 6036442014, 6036442016, 6036442017, 6036442019, 6036442021,
6036442023

SAMPLE DUPLICATE: 296717

Parameter	Units	6036442008 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	23.6	23.4	1	20	

QUALITY CONTROL DATA

Project: NPPC FT DODGE

Pace Project No.: 6036442

QC Batch: MSV/13359

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV 5035A Volatile Organics

Associated Lab Samples: 6036442002, 6036442003, 6036442005, 6036442008, 6036442010, 6036442012, 6036442014, 6036442016

METHOD BLANK: 297370

Associated Lab Samples: 6036442002, 6036442003, 6036442005, 6036442008, 6036442010, 6036442012, 6036442014, 6036442016

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	
1,1,1-Trichloroethane	ug/kg	ND	5.0	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	
1,1,2-Trichloroethane	ug/kg	ND	5.0	
1,1-Dichloroethane	ug/kg	ND	5.0	
1,1-Dichloroethene	ug/kg	ND	5.0	
1,1-Dichloropropene	ug/kg	ND	5.0	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	
1,2,3-Trichloropropane	ug/kg	ND	5.0	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	
1,2-Dibromo-3-chloropropane	ug/kg	ND	10.0	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	
1,2-Dichlorobenzene	ug/kg	ND	5.0	
1,2-Dichloroethane	ug/kg	ND	5.0	
1,2-Dichloroethene (Total)	ug/kg	ND	5.0	
1,2-Dichloropropane	ug/kg	ND	5.0	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	
1,3-Dichlorobenzene	ug/kg	ND	5.0	
1,3-Dichloropropane	ug/kg	ND	5.0	
1,4-Dichlorobenzene	ug/kg	ND	5.0	
2,2-Dichloropropane	ug/kg	ND	5.0	
2-Butanone (MEK)	ug/kg	ND	10.0	
2-Chlorotoluene	ug/kg	ND	5.0	
2-Hexanone	ug/kg	ND	20.0	
4-Chlorotoluene	ug/kg	ND	5.0	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	
Acetone	ug/kg	ND	20.0	
Benzene	ug/kg	ND	5.0	
Bromobenzene	ug/kg	ND	5.0	
Bromochloromethane	ug/kg	ND	5.0	
Bromodichloromethane	ug/kg	ND	5.0	
Bromoform	ug/kg	ND	5.0	
Bromomethane	ug/kg	ND	5.0	
Carbon disulfide	ug/kg	ND	5.0	
Carbon tetrachloride	ug/kg	ND	5.0	
Chlorobenzene	ug/kg	ND	5.0	
Chloroethane	ug/kg	ND	5.0	
Chloroform	ug/kg	ND	5.0	
Chloromethane	ug/kg	ND	5.0	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	
Dibromochloromethane	ug/kg	ND	5.0	

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QUALITY CONTROL DATA

Project: NPPC FT DODGE

Pace Project No.: 6036442

METHOD BLANK: 297370

Associated Lab Samples: 6036442002, 6036442003, 6036442005, 6036442008, 6036442010, 6036442012, 6036442014, 6036442016

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Dibromomethane	ug/kg	ND	5.0	
Dichlorodifluoromethane	ug/kg	ND	5.0	
Ethylbenzene	ug/kg	ND	5.0	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	
Methyl-tert-butyl ether	ug/kg	ND	5.0	
Methylene chloride	ug/kg	ND	5.0	
n-Butylbenzene	ug/kg	ND	5.0	
n-Propylbenzene	ug/kg	ND	5.0	
Naphthalene	ug/kg	ND	10.0	
p-Isopropyltoluene	ug/kg	ND	5.0	
sec-Butylbenzene	ug/kg	ND	5.0	
Styrene	ug/kg	ND	5.0	
tert-Butylbenzene	ug/kg	ND	5.0	
Tetrachloroethene	ug/kg	ND	5.0	
Toluene	ug/kg	ND	5.0	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	
Trichloroethene	ug/kg	ND	5.0	
Trichlorofluoromethane	ug/kg	ND	5.0	
Vinyl chloride	ug/kg	ND	5.0	
Xylene (Total)	ug/kg	ND	5.0	
1,2-Dichloroethane-d4 (S)	%	91	82-125	
4-Bromofluorobenzene (S)	%	98	71-124	
Dibromofluoromethane (S)	%	96	82-119	
Toluene-d8 (S)	%	95	76-120	

LABORATORY CONTROL SAMPLE: 297371

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	50	46.8	94	89-127	
1,1,1-Trichloroethane	ug/kg	50	49.5	99	82-129	
1,1,2,2-Tetrachloroethane	ug/kg	50	46.8	94	78-127	
1,1,2-Trichloroethane	ug/kg	50	48.2	96	84-127	
1,1-Dichloroethane	ug/kg	50	49.3	99	76-129	
1,1-Dichloroethene	ug/kg	50	49.5	99	79-134	
1,1-Dichloropropene	ug/kg	50	53.5	107	86-129	
1,2,3-Trichlorobenzene	ug/kg	50	45.4	91	78-136	
1,2,3-Trichloropropane	ug/kg	50	38.3	77	72-114	
1,2,4-Trichlorobenzene	ug/kg	50	45.8	92	76-139	
1,2,4-Trimethylbenzene	ug/kg	50	47.2	94	88-121	
1,2-Dibromo-3-chloropropane	ug/kg	50	43.4	87	79-120	
1,2-Dibromoethane (EDB)	ug/kg	50	45.7	91	85-124	
1,2-Dichlorobenzene	ug/kg	50	45.5	91	84-122	
1,2-Dichloroethane	ug/kg	50	46.6	93	78-125	

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QUALITY CONTROL DATA

Project: NPPC FT DODGE

Pace Project No.: 6036442

LABORATORY CONTROL SAMPLE: 297371

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethene (Total)	ug/kg	100	101	101	90-126	
1,2-Dichloropropane	ug/kg	50	49.6	99	84-122	
1,3,5-Trimethylbenzene	ug/kg	50	47.5	95	83-125	
1,3-Dichlorobenzene	ug/kg	50	46.4	93	85-119	
1,3-Dichloropropane	ug/kg	50	47.4	95	87-122	
1,4-Dichlorobenzene	ug/kg	50	46.7	93	84-119	
2,2-Dichloropropane	ug/kg	50	47.2	94	81-129	
2-Butanone (MEK)	ug/kg	100	85.8	86	68-122	
2-Chlorotoluene	ug/kg	50	51.4	103	86-127	
2-Hexanone	ug/kg	100	89.5	89	77-125	
4-Chlorotoluene	ug/kg	50	46.6	93	81-124	
4-Methyl-2-pentanone (MIBK)	ug/kg	100	88.7	89	78-121	
Acetone	ug/kg	100	94.4	94	59-122	
Benzene	ug/kg	50	46.2	92	81-120	
Bromobenzene	ug/kg	50	43.4	87	86-126	
Bromochloromethane	ug/kg	50	49.7	99	86-125	
Bromodichloromethane	ug/kg	50	47.6	95	86-121	
Bromoform	ug/kg	50	45.8	92	74-113	
Bromomethane	ug/kg	50	52.7	105	60-141	
Carbon disulfide	ug/kg	100	64.3	64	56-132	
Carbon tetrachloride	ug/kg	50	50.6	101	82-133	
Chlorobenzene	ug/kg	50	47.2	94	86-122	
Chloroethane	ug/kg	50	47.2	94	49-138	
Chloroform	ug/kg	50	49.9	100	81-121	
Chloromethane	ug/kg	50	44.5	89	40-119	
cis-1,2-Dichloroethene	ug/kg	50	47.1	94	86-122	
cis-1,3-Dichloropropene	ug/kg	50	45.0	90	83-126	
Dibromochloromethane	ug/kg	50	43.7	87	81-121	
Dibromomethane	ug/kg	50	46.8	94	89-124	
Dichlorodifluoromethane	ug/kg	50	39.5	79	12-145	
Ethylbenzene	ug/kg	50	47.1	94	84-125	
Hexachloro-1,3-butadiene	ug/kg	50	50.2	100	75-148	
Isopropylbenzene (Cumene)	ug/kg	50	38.8	78	72-115	
Methyl-tert-butyl ether	ug/kg	50	46.7	93	72-123	
Methylene chloride	ug/kg	50	47.3	95	70-125	
n-Butylbenzene	ug/kg	50	47.6	95	79-132	
n-Propylbenzene	ug/kg	50	47.0	94	80-125	
Naphthalene	ug/kg	50	47.9	96	66-153	
p-Isopropyltoluene	ug/kg	50	48.2	96	82-122	
sec-Butylbenzene	ug/kg	50	49.8	100	85-127	
Styrene	ug/kg	50	46.8	94	91-125	
tert-Butylbenzene	ug/kg	50	46.4	93	79-131	
Tetrachloroethene	ug/kg	50	48.2	96	81-130	
Toluene	ug/kg	50	48.3	97	84-120	
trans-1,2-Dichloroethene	ug/kg	50	54.2	108	84-130	
trans-1,3-Dichloropropene	ug/kg	50	46.7	93	88-125	
Trichloroethene	ug/kg	50	49.6	99	88-123	
Trichlorofluoromethane	ug/kg	50	42.0	84	63-118	

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QUALITY CONTROL DATA

Project: NPPC FT DODGE

Pace Project No.: 6036442

LABORATORY CONTROL SAMPLE: 297371

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vinyl chloride	ug/kg	50	49.1	98	62-133	
Xylene (Total)	ug/kg	150	143	95	88-121	
1,2-Dichloroethane-d4 (S)	%			88	82-125	
4-Bromofluorobenzene (S)	%			95	71-124	
Dibromofluoromethane (S)	%			95	82-119	
Toluene-d8 (S)	%			97	76-120	

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QUALITY CONTROL DATA

Project: NPPC FT DODGE

Pace Project No.: 6036442

QC Batch: MSV/13365

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV 5035A Volatile Organics

Associated Lab Samples: 6036442017, 6036442019, 6036442021, 6036442023

METHOD BLANK: 297497

Associated Lab Samples: 6036442017, 6036442019, 6036442021, 6036442023

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	
1,1,1-Trichloroethane	ug/kg	ND	5.0	
1,1,2,2-Tetrachloroethane	ug/kg	ND	5.0	
1,1,2-Trichloroethane	ug/kg	ND	5.0	
1,1-Dichloroethane	ug/kg	ND	5.0	
1,1-Dichloroethene	ug/kg	ND	5.0	
1,1-Dichloropropene	ug/kg	ND	5.0	
1,2,3-Trichlorobenzene	ug/kg	ND	5.0	
1,2,3-Trichloropropane	ug/kg	ND	5.0	
1,2,4-Trichlorobenzene	ug/kg	ND	5.0	
1,2,4-Trimethylbenzene	ug/kg	ND	5.0	
1,2-Dibromo-3-chloropropane	ug/kg	ND	10.0	
1,2-Dibromoethane (EDB)	ug/kg	ND	5.0	
1,2-Dichlorobenzene	ug/kg	ND	5.0	
1,2-Dichloroethane	ug/kg	ND	5.0	
1,2-Dichloroethene (Total)	ug/kg	ND	5.0	
1,2-Dichloropropane	ug/kg	ND	5.0	
1,3,5-Trimethylbenzene	ug/kg	ND	5.0	
1,3-Dichlorobenzene	ug/kg	ND	5.0	
1,3-Dichloropropane	ug/kg	ND	5.0	
1,4-Dichlorobenzene	ug/kg	ND	5.0	
2,2-Dichloropropane	ug/kg	ND	5.0	
2-Butanone (MEK)	ug/kg	ND	10.0	
2-Chlorotoluene	ug/kg	ND	5.0	
2-Hexanone	ug/kg	ND	20.0	
4-Chlorotoluene	ug/kg	ND	5.0	
4-Methyl-2-pentanone (MIBK)	ug/kg	ND	10.0	
Acetone	ug/kg	ND	20.0	
Benzene	ug/kg	ND	5.0	
Bromobenzene	ug/kg	ND	5.0	
Bromochloromethane	ug/kg	ND	5.0	
Bromodichloromethane	ug/kg	ND	5.0	
Bromoform	ug/kg	ND	5.0	
Bromomethane	ug/kg	ND	5.0	
Carbon disulfide	ug/kg	ND	5.0	
Carbon tetrachloride	ug/kg	ND	5.0	
Chlorobenzene	ug/kg	ND	5.0	
Chloroethane	ug/kg	ND	5.0	
Chloroform	ug/kg	ND	5.0	
Chloromethane	ug/kg	ND	5.0	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	
Dibromochloromethane	ug/kg	ND	5.0	

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QUALITY CONTROL DATA

Project: NPPC FT DODGE
Pace Project No.: 6036442

METHOD BLANK: 297497

Associated Lab Samples: 6036442017, 6036442019, 6036442021, 6036442023

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
Dibromomethane	ug/kg	ND	5.0	
Dichlorodifluoromethane	ug/kg	ND	5.0	
Ethylbenzene	ug/kg	ND	5.0	
Hexachloro-1,3-butadiene	ug/kg	ND	5.0	
Isopropylbenzene (Cumene)	ug/kg	ND	5.0	
Methyl-tert-butyl ether	ug/kg	ND	5.0	
Methylene chloride	ug/kg	ND	5.0	
n-Butylbenzene	ug/kg	ND	5.0	
n-Propylbenzene	ug/kg	ND	5.0	
Naphthalene	ug/kg	ND	10.0	
p-Isopropyltoluene	ug/kg	ND	5.0	
sec-Butylbenzene	ug/kg	ND	5.0	
Styrene	ug/kg	ND	5.0	
tert-Butylbenzene	ug/kg	ND	5.0	
Tetrachloroethene	ug/kg	ND	5.0	
Toluene	ug/kg	ND	5.0	
trans-1,2-Dichloroethene	ug/kg	ND	5.0	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	
Trichloroethene	ug/kg	ND	5.0	
Trichlorofluoromethane	ug/kg	ND	5.0	
Vinyl chloride	ug/kg	ND	5.0	
Xylene (Total)	ug/kg	ND	5.0	
1,2-Dichloroethane-d4 (S)	%	89	82-125	
4-Bromofluorobenzene (S)	%	92	71-124	
Dibromofluoromethane (S)	%	93	82-119	
Toluene-d8 (S)	%	102	76-120	

LABORATORY CONTROL SAMPLE: 297498

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	50	54.9	110	89-127	
1,1,1-Trichloroethane	ug/kg	50	54.8	110	82-129	
1,1,2,2-Tetrachloroethane	ug/kg	50	53.7	107	78-127	
1,1,2-Trichloroethane	ug/kg	50	56.2	112	84-127	
1,1-Dichloroethane	ug/kg	50	55.5	111	76-129	
1,1-Dichloroethene	ug/kg	50	49.2	98	79-134	
1,1-Dichloropropene	ug/kg	50	53.5	107	86-129	
1,2,3-Trichlorobenzene	ug/kg	50	52.1	104	78-136	
1,2,3-Trichloropropane	ug/kg	50	46.6	93	72-114	
1,2,4-Trichlorobenzene	ug/kg	50	50.8	102	76-139	
1,2,4-Trimethylbenzene	ug/kg	50	49.1	98	88-121	
1,2-Dibromo-3-chloropropane	ug/kg	50	50.5	101	79-120	
1,2-Dibromoethane (EDB)	ug/kg	50	54.0	108	85-124	
1,2-Dichlorobenzene	ug/kg	50	49.1	98	84-122	
1,2-Dichloroethane	ug/kg	50	53.9	108	78-125	

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QUALITY CONTROL DATA

Project: NPPC FT DODGE

Pace Project No.: 6036442

LABORATORY CONTROL SAMPLE: 297498

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethene (Total)	ug/kg	100	112	112	90-126	
1,2-Dichloropropane	ug/kg	50	56.1	112	84-122	
1,3,5-Trimethylbenzene	ug/kg	50	48.6	97	83-125	
1,3-Dichlorobenzene	ug/kg	50	50.1	100	85-119	
1,3-Dichloropropane	ug/kg	50	53.0	106	87-122	
1,4-Dichlorobenzene	ug/kg	50	49.2	98	84-119	
2,2-Dichloropropane	ug/kg	50	49.9	100	81-129	
2-Butanone (MEK)	ug/kg	100	93.7	94	68-122	
2-Chlorotoluene	ug/kg	50	53.9	108	86-127	
2-Hexanone	ug/kg	100	102	102	77-125	
4-Chlorotoluene	ug/kg	50	48.8	98	81-124	
4-Methyl-2-pentanone (MIBK)	ug/kg	100	97.0	97	78-121	
Acetone	ug/kg	100	92.3	92	59-122	
Benzene	ug/kg	50	51.8	104	81-120	
Bromobenzene	ug/kg	50	52.4	105	86-126	
Bromochloromethane	ug/kg	50	53.8	108	86-125	
Bromodichloromethane	ug/kg	50	53.9	108	86-121	
Bromoform	ug/kg	50	50.5	101	74-113	
Bromomethane	ug/kg	50	58.4	117	60-141	
Carbon disulfide	ug/kg	100	68.5	68	56-132	
Carbon tetrachloride	ug/kg	50	54.5	109	82-133	
Chlorobenzene	ug/kg	50	50.0	100	86-122	
Chloroethane	ug/kg	50	51.3	103	49-138	
Chloroform	ug/kg	50	53.1	106	81-121	
Chloromethane	ug/kg	50	48.2	96	40-119	
cis-1,2-Dichloroethene	ug/kg	50	52.3	105	86-122	
cis-1,3-Dichloropropene	ug/kg	50	49.6	99	83-126	
Dibromochloromethane	ug/kg	50	51.1	102	81-121	
Dibromomethane	ug/kg	50	54.4	109	89-124	
Dichlorodifluoromethane	ug/kg	50	40.3	81	12-145	
Ethylbenzene	ug/kg	50	52.6	105	84-125	
Hexachloro-1,3-butadiene	ug/kg	50	53.6	107	75-148	
Isopropylbenzene (Cumene)	ug/kg	50	43.1	86	72-115	
Methyl-tert-butyl ether	ug/kg	50	51.7	103	72-123	
Methylene chloride	ug/kg	50	50.8	102	70-125	
n-Butylbenzene	ug/kg	50	49.3	99	79-132	
n-Propylbenzene	ug/kg	50	50.1	100	80-125	
Naphthalene	ug/kg	50	50.7	101	66-153	
p-Isopropyltoluene	ug/kg	50	48.5	97	82-122	
sec-Butylbenzene	ug/kg	50	51.6	103	85-127	
Styrene	ug/kg	50	49.6	99	91-125	
tert-Butylbenzene	ug/kg	50	48.0	96	79-131	
Tetrachloroethene	ug/kg	50	53.2	106	81-130	
Toluene	ug/kg	50	50.8	102	84-120	
trans-1,2-Dichloroethene	ug/kg	50	59.8	120	84-130	
trans-1,3-Dichloropropene	ug/kg	50	50.4	101	88-125	
Trichloroethene	ug/kg	50	52.3	105	88-123	
Trichlorofluoromethane	ug/kg	50	44.3	89	63-118	

Date: 03/12/2008 04:58 PM

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: NPPC FT DODGE

Pace Project No.: 6036442

LABORATORY CONTROL SAMPLE: 297498

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vinyl chloride	ug/kg	50	49.7	99	62-133	
Xylene (Total)	ug/kg	150	155	104	88-121	
1,2-Dichloroethane-d4 (S)	%			102	82-125	
4-Bromofluorobenzene (S)	%			99	71-124	
Dibromofluoromethane (S)	%			99	82-119	
Toluene-d8 (S)	%			100	76-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 297499

297500

Parameter	Units	6036442017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
1,1-Dichloroethene	ug/kg	ND	59.8	60.3	58.9	54.7	98	91	37-172	7	41
Benzene	ug/kg	ND	59.8	60.3	61.8	57.3	103	95	47-145	8	36
Chlorobenzene	ug/kg	ND	59.8	60.3	61.8	56.4	103	94	52-151	9	29
Toluene	ug/kg	ND	59.8	60.3	63.3	57.6	106	96	32-149	9	33
Trichloroethene	ug/kg	8.0	59.8	60.3	72.5	70.3	108	103	43-166	3	37
1,2-Dichloroethane-d4 (S)	%						90	99	82-125		
4-Bromofluorobenzene (S)	%						89	94	71-124		
Dibromofluoromethane (S)	%						92	96	82-119		
Toluene-d8 (S)	%						96	95	76-120		

Date: 03/12/2008 04:58 PM

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: NPPC FT DODGE
Pace Project No.: 6036442

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

BATCH QUALIFIERS

Batch: MSV/13303

[1] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1e Diluted due to sediment in sample container.

2e Anti-foamer added due to foaming of sample in purge vessel.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NPPC FT DODGE

Pace Project No.: 6036442

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
6036442002	TB030408/SOIL	ASTM D2974-87	PMST/2918		
6036442003	DP-10/SB03	ASTM D2974-87	PMST/2918		
6036442005	DP-9/SB03	ASTM D2974-87	PMST/2918		
6036442001	TB030408/GW	EPA 5030B/8260	MSV/13303		
6036442004	DP-10/GW01	EPA 5030B/8260	MSV/13303		
6036442006	DP-9/GW01	EPA 5030B/8260	MSV/13303		
6036442007	DUP-1/GW01	EPA 5030B/8260	MSV/13303		
6036442009	DP-4/GW01	EPA 5030B/8260	MSV/13303		
6036442011	DP-2/GW01	EPA 5030B/8260	MSV/13303		
6036442013	DP-3/GW01	EPA 5030B/8260	MSV/13303		
6036442015	DP-1/GW01	EPA 5030B/8260	MSV/13303		
6036442018	DP-8/GW01	EPA 5030B/8260	MSV/13303		
6036442020	DP-6/GW01	EPA 5030B/8260	MSV/13303		
6036442022	DP-5/GW01	EPA 5030B/8260	MSV/13303		
6036442024	DP-7/GW01	EPA 5030B/8260	MSV/13303		
6036442008	DP-4/SB01	ASTM D2974-87	PMST/2922		
6036442010	DP-2/SB02	ASTM D2974-87	PMST/2922		
6036442012	DP-3/SB03	ASTM D2974-87	PMST/2922		
6036442014	DP-1/SB01	ASTM D2974-87	PMST/2922		
6036442016	DP-8/SB02	ASTM D2974-87	PMST/2922		
6036442017	DUP-1/SB02	ASTM D2974-87	PMST/2922		
6036442019	DP-6/SB02	ASTM D2974-87	PMST/2922		
6036442021	DP-5/SB01	ASTM D2974-87	PMST/2922		
6036442023	DP-7/SB03	ASTM D2974-87	PMST/2922		
6036442002	TB030408/SOIL	EPA 8260	MSV/13359		
6036442003	DP-10/SB03	EPA 8260	MSV/13359		
6036442005	DP-9/SB03	EPA 8260	MSV/13359		
6036442008	DP-4/SB01	EPA 8260	MSV/13359		
6036442010	DP-2/SB02	EPA 8260	MSV/13359		
6036442012	DP-3/SB03	EPA 8260	MSV/13359		
6036442014	DP-1/SB01	EPA 8260	MSV/13359		
6036442016	DP-8/SB02	EPA 8260	MSV/13359		
6036442017	DUP-1/SB02	EPA 8260	MSV/13365		
6036442019	DP-6/SB02	EPA 8260	MSV/13365		
6036442021	DP-5/SB01	EPA 8260	MSV/13365		
6036442023	DP-7/SB03	EPA 8260	MSV/13365		

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Page: <u>2</u> of <u>3</u>	
Company: <u>BURNS & MCDONNELL</u>		Report To: <u>GREG GORMAN</u>		Attention: <u>GREG GORMAN</u>		1159312	
Address: <u>7400 WARD PARKWAY</u>		Copy To:		Company Name: <u>BURNS & MCDONNELL</u>			
City/State/Zip: <u>KANSAS CITY MO 64114</u>		Purchase Order No.:		Address: <u>7400 WARD PARKWAY</u>		REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER _____	
Email To: <u>GGORMAN@burnsmcd.com</u>		Project Name: <u>NPPC FORT DODGE</u>		Pace Quote Reference:			
Phone: <u>816 822 3327</u> Fax: <u>816 822 3494</u>		Project Number: <u>48064</u>		Pace Project Manager: <u>ANGIE BROWN</u>		Site Location	
Requested Due Date/TAT: <u>5 DAY</u>				Pace Profile #:		STATE: <u>IOWA</u>	

ITEM #	Section D Required Client Information	Matrix Codes MATRIX / CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Tissue TS Other OT	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analysis Test ↓ VOCs 8760	Requested Analysis Filtered (Y/N)												Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
					COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other															
					DATE	TIME	DATE	TIME																									
1	DP-3/SB03	SL G			03/04/08	1149			1	X								X	WGFU												012		
2	DP-3/GW01	WT G			03/04/08	1204			3			X						X	3(DGPH)												013		
3	DP-1/SB01	SL G			03/04/08	1232			1	X								X	WGFU												014		
4	DP-1/GW01	WT G			03/04/08	1300			3			X						X	3(DGPH)												015		
5	DP-8/SB02	SL G			03/04/08	1335			1	X								X	WGFU												016		
6	DP-1/SB02	SL G			03/04/08	—			1	X								X	⊕												017		
7	DP-8/GW01	WT G			03/04/08	1353			3			X						X	3(DGPH)												018		
8	DP-6/SB02	SL G			03/04/08	1413			1	X								X	WGFU												019		
9	DP-6/GW01	WT G			03/04/08	1430			3			X						X	3(DGPH)												020		
10	DP-5/SB01	SL G			03/04/08	1442			1	X								X	WGFU												021		
11	DP-5/GW01	WT G			03/04/08	1455			3			X						X	3(DGPH)												022		
12	DP-7/SB03	SL G			03/04/08	1513			1	X								X	WGFU												023		
ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION				DATE		TIME		ACCEPTED BY / AFFILIATION				DATE		TIME		SAMPLE CONDITIONS															
		[Signature]				03/05/08		1702		[Signature]				3/5		1702		0.5 Y Y Y															

ORIGINAL		SAMPLER NAME AND SIGNATURE								Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
		PRINT Name of SAMPLER: <u>DAVID BARKER</u>											
		SIGNATURE of SAMPLER: <u>[Signature]</u> DATE Signed (MM/DD/YY): <u>03/05/08</u>											

ATTACHMENT F
Laboratory Analytical Report – Sub-Slab Vapor

LABORATORY REPORT

March 14, 2008

Greg Gorman
Burns & McDonnell Engineering Company, Inc.
9400 Ward Parkway
Kansas City, MO 64114

RE: Nestle Purina Petcare Fort Dodge / 48064

Dear Greg:

Enclosed are the results of the samples submitted to our laboratory on March 6, 2008. For your reference, these analyses have been assigned our service request number P0800581.

All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein. Your report contains 10 pages.

Columbia Analytical Services, Inc. is certified by the California Department of Health Services, NELAP Laboratory Certificate No. 02115CA; Arizona Department of Health Services, Certificate No. AZ0694; Florida Department of Health, NELAP Certification E871020; New Jersey Department of Environmental Protection, NELAP Laboratory Certification ID #CA009; New York State Department of Health, NELAP NY Lab ID No: 11221; Oregon Environmental Laboratory Accreditation Program, NELAP ID: CA20007; The American Industrial Hygiene Association, Laboratory #101661; Department of the Navy (NFESC); Pennsylvania Registration No. 68-03307. Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact me for information corresponding to a particular certification.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

Columbia Analytical Services, Inc.

Kelly M Horiuchi

Kelly Horiuchi
Project Manager

Page
1 of 10

Client: Burns & McDonnell Engineering Company, Inc.
Project: Nestle Purina Petcare Fort Dodge / 48064

CAS Project No: P0800581

CASE NARRATIVE

The samples were received intact under chain of custody on March 6, 2008 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Volatile Organic Compound Analysis

The samples were analyzed for selected volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator.

No anomalies were encountered during this analysis.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for utilization of less than the complete report.

Client: Burns & McDonnell Engineering Company, Inc.
Project: Nestle Purina Petcare Fort Dodge 48064

Folder: P0800581

Detailed Sample Information

<u>CAS Sample ID</u>	<u>Client Sample ID</u>	<u>Container Type</u>	<u>Pi1</u> (Hg)	<u>Pi1</u> (psig)	<u>Pf1</u>	<u>Pi2</u> (Hg)	<u>Pi2</u> (psig)	<u>Pf2</u>	<u>Cont ID</u>	<u>FC ID</u>
P0800581-001.01	SVP-1/AR01	1.0 L-Summa Canister Source	-3.3	-1.6	10.0				1SC00460	OA00005
P0800581-002.01	SVP-2/AR01	1.0 L-Summa Canister Source	-4.0	-2.0	10.0				1SC00573	OA00519

Miscellaneous Items - received

AVG00580
AVG00691

Columbia Analytical Services, Inc.

Sample Acceptance Check Form

Client: Burns & McDonnell Engineering Company, Inc.Work order: P0800581Project: Nestle Purina Petcare Fort Dodge / 484064Sample(s) received on: 03/06/08Date opened: 03/06/08by: MZAMORA

Note: This form is used for all samples received by CAS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

- | | Yes | No | N/A |
|--|-------------------------------------|-------------------------------------|-------------------------------------|
| 1 Were sample containers properly marked with client sample ID? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 Container(s) supplied by CAS? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 Did sample containers arrive in good condition? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 Were chain-of-custody papers used and filled out? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 Did sample container labels and/or tags agree with custody papers? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 Was sample volume received adequate for analysis? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 Are samples within specified holding times? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 Was proper temperature (thermal preservation) of cooler at receipt adhered to? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Cooler Temperature _____ °C Blank Temperature _____ °C | | | |
| 9 Was a trip blank received? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Trip blank supplied by CAS: Serial # _____ -TB _____ | | | |
| 10 Were custody seals on outside of cooler/Box? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Location of seal(s)? _____ Sealing Lid? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Were signature and date included? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Were seals intact? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Were custody seals on outside of sample container? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Location of seal(s)? _____ Sealing Lid? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Were signature and date included? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Were seals intact? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11 Do containers have appropriate preservation , according to method/SOP or Client specified information? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Is there a client indication that the submitted samples are pH preserved? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Were VOA vials checked for presence/absence of air bubbles? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Does the client/method/SOP require that the analyst check the sample pH and <u>if necessary</u> alter it? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 12 Tubes: Are the tubes capped and intact? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Do they contain moisture? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 13 Badges: Are the badges properly capped and intact? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Are dual bed badges separated and individually capped and intact? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P0800581-001.01	1.0 L Source Can					
P0800581-002.01	1.0 L Source Can					

Explain any discrepancies: (include lab sample ID numbers): _____

*Required pH: Phenols/COD/NBS/TOC/TOX/NO3+NO2/TKN/T.PHOS, H2SO4 (pH<2); Metals, HNO3 (pH<2); CN (NaOH or NaOH/Asc Acid) (pH>12);

Diss. Sulfide, NaOH (pH>12); T. Sulfide, NaOH/ZnAc (pH>12)

RSK - MEEPP, HCL (pH<2); RSK - CO2 (pH 5-8); Sulfur (pH>4)

P0800581_Burns & McDonnell Engineering Company, Inc., Nestle Purina Petcare Fort Dodge, 484064 - Page 1 of 1

03/06/08 11:13 AM

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Burns & McDonnell Engineering Company, Inc.

Client Sample ID: SVP-1/AR01

Client Project ID: Nestle Purina Petcare Fort Dodge / 48064

CAS Project ID: P0800581

CAS Sample ID: P0800581-001

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/HP5972/HP5890 II+/MS2

Analyst: Sadia Terranova

Sampling Media: 1.0 L Summa Canister

Test Notes:

Container ID: 1SC00460

Date Collected: 3/4/08

Date Received: 3/6/08

Date Analyzed: 3/7/08

Volume(s) Analyzed: 0.40 Liter(s)

Initial Pressure (psig): -1.6

Final Pressure (psig): 10.0

Canister Dilution Factor: 1.89

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	4.7	ND	1.8	
75-09-2	Methylene Chloride	ND	4.7	ND	1.4	
156-59-2	cis-1,2-Dichloroethene	ND	4.7	ND	1.2	
67-66-3	Chloroform	ND	4.7	ND	0.97	
71-43-2	Benzene	ND	4.7	ND	1.5	
79-01-6	Trichloroethene	ND	4.7	ND	0.88	
108-88-3	Toluene	ND	4.7	ND	1.3	
127-18-4	Tetrachloroethene	170	4.7	25	0.70	
100-41-4	Ethylbenzene	ND	4.7	ND	1.1	
179601-23-1	m,p-Xylenes	4.9	4.7	1.1	1.1	
95-47-6	o-Xylene	ND	4.7	ND	1.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Burns & McDonnell Engineering Company, Inc.

Client Sample ID: SVP-2/AR01

Client Project ID: Nestle Purina Petcare Fort Dodge / 48064

CAS Project ID: P0800581

CAS Sample ID: P0800581-002

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/HP5972/HP5890 II+/MS2

Analyst: Sadia Terranova

Sampling Media: 1.0 L Summa Canister

Test Notes:

Container ID: 1SC00573

Date Collected: 3/4/08

Date Received: 3/6/08

Date Analyzed: 3/7/08

Volume(s) Analyzed: 0.00025 Liter(s)

Initial Pressure (psig): -2.0

Final Pressure (psig): 10.0

Canister Dilution Factor: 1.94

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	7,800	ND	3,000	
75-09-2	Methylene Chloride	ND	7,800	ND	2,200	
156-59-2	cis-1,2-Dichloroethene	ND	7,800	ND	2,000	
67-66-3	Chloroform	ND	7,800	ND	1,600	
71-43-2	Benzene	ND	7,800	ND	2,400	
79-01-6	Trichloroethene	ND	7,800	ND	1,400	
108-88-3	Toluene	ND	7,800	ND	2,100	
127-18-4	Tetrachloroethene	630,000	7,800	93,000	1,100	
100-41-4	Ethylbenzene	ND	7,800	ND	1,800	
179601-23-1	m,p-Xylenes	ND	7,800	ND	1,800	
95-47-6	o-Xylene	ND	7,800	ND	1,800	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

COLUMBIA ANALYTICAL SERVICES, INC.

RESULTS OF ANALYSIS

Page 1 of 1

Client: Burns & McDonnell Engineering Company, Inc.
Client Sample ID: Method Blank
Client Project ID: Nestle Purina Petcare Fort Dodge / 48064

CAS Project ID: P0800581
CAS Sample ID: P080307-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5972/HP5890 II+/MS2
Analyst: Sadia Terranova
Sampling Media: 1.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 3/7/08
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbV	MRL ppbV	Data Qualifier
75-01-4	Vinyl Chloride	ND	1.0	ND	0.39	
75-09-2	Methylene Chloride	ND	1.0	ND	0.29	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ND	0.25	
67-66-3	Chloroform	ND	1.0	ND	0.20	
71-43-2	Benzene	ND	1.0	ND	0.31	
79-01-6	Trichloroethene	ND	1.0	ND	0.19	
108-88-3	Toluene	ND	1.0	ND	0.27	
127-18-4	Tetrachloroethene	ND	1.0	ND	0.15	
100-41-4	Ethylbenzene	ND	1.0	ND	0.23	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
95-47-6	o-Xylene	ND	1.0	ND	0.23	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

COLUMBIA ANALYTICAL SERVICES, INC.

SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 1

Client: Burns & McDonnell Engineering Company, Inc.
Client Project ID: Nestle Purina Petcare Fort Dodge / 48064

CAS Project ID: P0800581

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/HP5972/HP5890 II+/MS2
Analyst: Sadia Terranova
Sampling Media: 1.0 L Summa Canister(s)
Test Notes:

Date(s) Collected: 3/4/08

Date(s) Received: 3/6/08

Date(s) Analyzed: 3/7/08

Client Sample ID	CAS Sample ID	1,2-Dichloroethane-d4		Toluene-d8		Bromofluorobenzene		Data Qualifier
		%	Acceptance	%	Acceptance	%	Acceptance	
		Recovered	Limits	Recovered	Limits	Recovered	Limits	
Method Blank	P080307-MB	97	70-130	100	70-130	93	70-130	
Lab Control Sample	P080307-LCS	100	70-130	101	70-130	93	70-130	
SVP-1/AR01	P0800581-001	102	70-130	98	70-130	91	70-130	
SVP-2/AR01	P0800581-002	104	70-130	99	70-130	91	70-130	

COLUMBIA ANALYTICAL SERVICES, INC.

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 1

Client: Burns & McDonnell Engineering Company, Inc.

Client Sample ID: Lab Control Sample

Client Project ID: Nestle Purina Petcare Fort Dodge / 48064

CAS Project ID: P0800581

CAS Sample ID: P080307-LCS

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/HP5972/HP5890 II+/MS2

Analyst: Sadia Terranova

Sampling Media: 1.0 L Summa Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 3/07/08

Volume(s) Analyzed: NA Liter(s)

CAS #	Compound	Spike Amount	Result	% Recovery	CAS	Data
		ng	ng		Acceptance	
75-01-4	Vinyl Chloride	24.8	24.7	100	Limits	
75-09-2	Methylene Chloride	27.8	26.7	96		
156-59-2	cis-1,2-Dichloroethene	27.0	28.1	104		
67-66-3	Chloroform	29.8	30.9	104		
71-43-2	Benzene	27.0	26.9	100		
79-01-6	Trichloroethene	27.3	26.8	98		
108-88-3	Toluene	26.5	27.0	102		
127-18-4	Tetrachloroethene	26.0	25.8	99		
100-41-4	Ethylbenzene	26.3	26.8	102		
179601-23-1	m,p-Xylenes	62.5	63.9	102		
95-47-6	o-Xylene	29.8	30.1	101		

FHWA	COUNTY	CITY	MONTH	O	YEAR OF	FREQUEN	FEATURE	FRACTUR	FRACTUR	FRACTUR
5071	WEBSTEF	FORT DOI	8		2005	24	LIZARD CIN			
5100	WEBSTEF	FORT DOI	8		2006	12	SOLDIER Y	8		1999

SUFFICIE	STRUCTU	LENGTH	WIDTH	YEAR BUI	INVENTOI	SD/FO	OWNER C	PRINT CO	BRIDGE P
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48	502	230	30	2002	11.9		4	3	3
79	403	918	29.8	1961	44.6		4	3	5

OPEN PO: UNDERWATER INSPECTION

A

A

0

Site Name: Sunshine Laundry, Fort Dodge

Brownfield Initial Site Screening (ISS)

Project Manager: Hylton Jackson

Date: 7/10/2008

**CON 12-15
Doc #19329**

☒ **3931 - Phase II Assessment Review - standard**

Phase II submitted as part of standard real estate development, pre-purchase agreement, or other due diligence, not a part of a community grant project, or

☐ **3837 - Phase II Assessment – grant funded**

Phase II submitted as part of an EPA grant funded community-wide or targeted assessment project – see Mel Pins if questions on this determination

Location:

Latitude: 42.503510 *Longitude:* 94.164003
(Decimal Degree format)

County: Webster

USGS Quadrant: Fort Dodge N 7.5'

Site Size: 0.93

Site Dimension:

☒ Acres ☐ Square Feet
☐ Feet ☐ Square Miles ☐ Miles

Site Alias Name(s): _____

Congressional District: 4

Grant Recipient Name, Address & Contact: _____

Current Owner & Address:

Sunshine Company, LC
2422 5th Ave. S
Fort Dodge, IA 50501

Responsible Party Name(s) & Address, if different from current owner:

Site Street Address or Tier, Range, Section & Subsections (if street address is unknown)
2422 5th Avenue
Fort Dodge, IA 50501

T 89 N, R 28 W, SW 1/4 Sec 21

Directions to site:

From US-20 south of Fort Dodge take the CR-P59 exit, (Exit 124), toward US-20 Business/Fort Dodge/Coalville, proceed 0.3 mi. Turn right onto Nelson Ave/CR-P59, proceed 3.5 mi. Turn left onto US-20 BR/CR-P59/200th ST. Continue to follow US-20 BR, proceed 1.8 mi. End at 2422 5th Avenue.

Summarize the site history (past usages, past ownerships, wastes, known or suspected contamination pathways such as tanks, septic tank/tile field, lagoon, land applications, S.W. burial, etc)

A Phase I report was referenced in the Phase II but the Phase I was not submitted to the Department for review. The site was a former dry cleaning facility which operated for approximately eight years. The Phase II referenced EPA documents that indicated tetrachloroethene (PCE) stored in the shed on northern portion of the site had leaked on some occasions. No other reference to site history was provided.

Briefly describe the site assessment that was conducted (number of borings, monitoring wells, number of samples, depth of soil samples and monitoring wells, analysis, etc.)

As a result of the information obtained in the Phase I report, a soil and groundwater Phase II site Environmental site Assessment was performed by Burns and McDonnell Engineering Company, Inc. Ten borings (DP-1 through DP-10) were advanced to depths from 20 to 26 feet below ground surface (bgs). A soil sample was collected from each boring after field screening for organic vapors using a photo ionization detector (PID). All ten soil samples were analyzed for volatile organic compounds (VOCs). A groundwater sample was collected from each boring and analyzed for VOCs. Two sub-slab vapor samples (SVP-1 and SPV-2) were collected below the slab of the main building. The soil vapor samples were analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX), PCE, trichloroethene (TCE), chloroform, methylene chloride, and vinyl chloride (VC).

Summarize the findings and conclusions regarding the contaminants found and their extent and concentrations. Relate those values to known criteria such as statewide standards, MCLs, water quality standards, background levels or other benchmarks used to determine site priority.

Soil:

PCE was detected in one soil sample above Statewide Standard. TCE, Cis-1,2-Dichloroethane (Cis-1,2-DCE), Trans-1,2- Dichloroethane (Trans-1,2-DCE), and 1,2-Dichloroethane (1,2-DCE) were detected in one or more soil samples below their applicable Statewide Standard. No other soil contaminants were detected above laboratory detection limits. See Table below.

Concentrations that exceed the Statewide Standard in **Bold**

Sample Location	Contaminant (mg/kg)				
	PCE	TCE	Cis-1,2-DCE	Trans-1,2-DCE	1,2-DCE
DP-1 (Dup)	0.319	0.008	0.0106	ND	0.0135
DP-2	0.034	ND	ND	ND	ND
DP-3	ND	ND	ND	ND	ND
DP-4	1.850	ND	ND	ND	ND
DP-5	0.0167	ND	ND	ND	ND
DP-6	0.291	ND	ND	ND	ND
DP-7	ND	ND	ND	ND	ND
DP-8	0.262	0.0105	0.0148	ND	0.0194
DP-9	22.1	0.052	ND	ND	ND
DP-10	ND	ND	ND	ND	ND
Statewide Standard (mg/kg)	5.7	7.7	760	1500	34

ND - Compound not detected above laboratory detection limits

Groundwater:

PCE; TCE; Cis-1,2-DCE; Trans-1,2-DCE; 1,2-DCE; and VC were detected in one or more groundwater samples above their applicable Statewide Standard. No other groundwater contaminants were detected above the applicable Statewide Standard. See Table below

Concentrations that exceed the Statewide Standard in **Bold**

Sample Location	Contaminant (mg/L)							
	PCE	TCE	1,2-DCE	Cis-1,2-DCE	Trans-1,2-DCE	1,2,4-Trimethyl benzene	VC	Chloroethane
DP-1	0.012	ND	ND	ND	ND	ND	ND	ND
DP-2	0.034	ND	ND	ND	ND	ND	ND	ND
DP-3	0.0664	ND	ND	ND	ND	ND	ND	ND
DP-4	0.190	ND	0.0264	0.0243	0.0021	ND	ND	ND
DP-5	0.0248	ND	ND	ND	ND	ND	ND	ND
DP-6	1.040	0.0379	0.0070	0.0070	ND	ND	ND	ND
DP-7	0.511	ND	ND	ND	ND	ND	ND	ND
DP-8	0.178	0.103	0.440	0.302	0.139	ND	0.0023	0.0014
DP-9/Dup-1	2.140	0.0048	0.0099	0.0069	0.0030	0.0013	ND	ND
DP-10	ND	ND	ND	ND	ND	ND	ND	ND
Statewide Standard* (mg/L)	.005	.005	.005	.07	.1	.35	.002	NA

*Statewide Standard for Protected Groundwater

ND - Compound not detected above laboratory detection limits

Soil Vapor:

PCE; and m,p-xylene were detected in sub-slab vapor samples above the laboratory detection limits. The detection limit for sample # SVP-1/AR01 was 4.7 ug/m³. Due to a dilution factor, the detection limit for SPV-2/AR01 was 7,800 ug/m³. No other contaminants were detected above the detection limits. While there are no Statewide Standards for sub-slab soil vapors, the detected concentrations were converted to indoor air concentrations (using an attenuation factor of 0.1) and the results were entered into the Land Recycling Program (LRP) cumulative risk calculator. The site is not enrolled in the LRP and the use of the cumulative risk calculator to evaluate the detected contaminant concentrations does not infer that a risk assessment has been completed for this site. The results of the cumulative risk calculation are referenced here because it is the only method available to evaluate sub-slab soil vapor concentrations. See Table below for detected concentrations.

Concentrations that exceed the LRP cumulative risk calculator for site worker in **Bold**

Contaminant (ug/m ³)	Sample Number/Location	
	SVP-1/AR01*	SPV-2/AR01
PCE	170	630,000
m,p-x ylenes	4.9	ND

* Soil vapor sample SVP/AR01 failed the chemical leak test (helium) and the results are considered invalid.

Identify on-site or off-site potential and actual targets (e.g., municipal wells, private wells, drinking water intakes). What is known of the neighboring area, i.e., are there residences, businesses, public use areas, etc.? Are there utility lines that could be impacted by site contaminants? Identify any other use/location issues that deserve consideration.

The site is on the southwestern side of Fort Dodge, in a commercial and industrial area. Aerial photographs indicate the site is 1,400 feet west of the nearest residence. The site is not in a source water protection zone for any public water supply but IDNR Geosam records indicate a private well (Steve and Judy Rezek) is located 900 feet south of the site. It is assumed that the site is served by municipal water and sewer.

Rate the site on a scale of 1 to 4, in decreasing order of severity or priority.

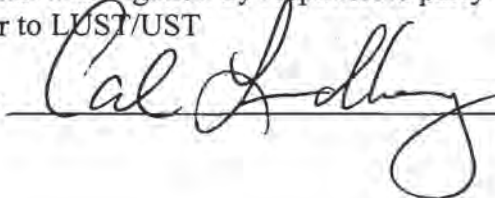
Summarize the reasoning, knowledge or any other information used in determining your recommendation regarding the priority assigned to this site.

Soil and groundwater at the site have been impacted by contamination. Chlorinated solvents have been detected in groundwater samples above the Statewide Standard for Protected Groundwater and above the Statewide Standard for Non-Protected Groundwater. PCE was detected in one soil sample at a concentration that exceeded the Statewide Standard. PCE has also been detected in the valid soil vapor sample at a concentration that fails the LRP cumulative risk calculator by several orders of magnitude (with the assumed attenuation factor of 0.10). Nature and extent of the soil and groundwater contamination has not been determined and groundwater gradient has not been established. Further assessment by the Responsible Party will be required and the site will go on to an ESS under CERCLA.

Site recommended for:

- ☐ No further action
- ☐ Additional investigation under state program (activity code 2824)
- ☒ Additional investigation under CERCLA (Extended Site Screening)
- ☐ Additional investigation by responsible party
- ☐ Transfer to LUST/UST

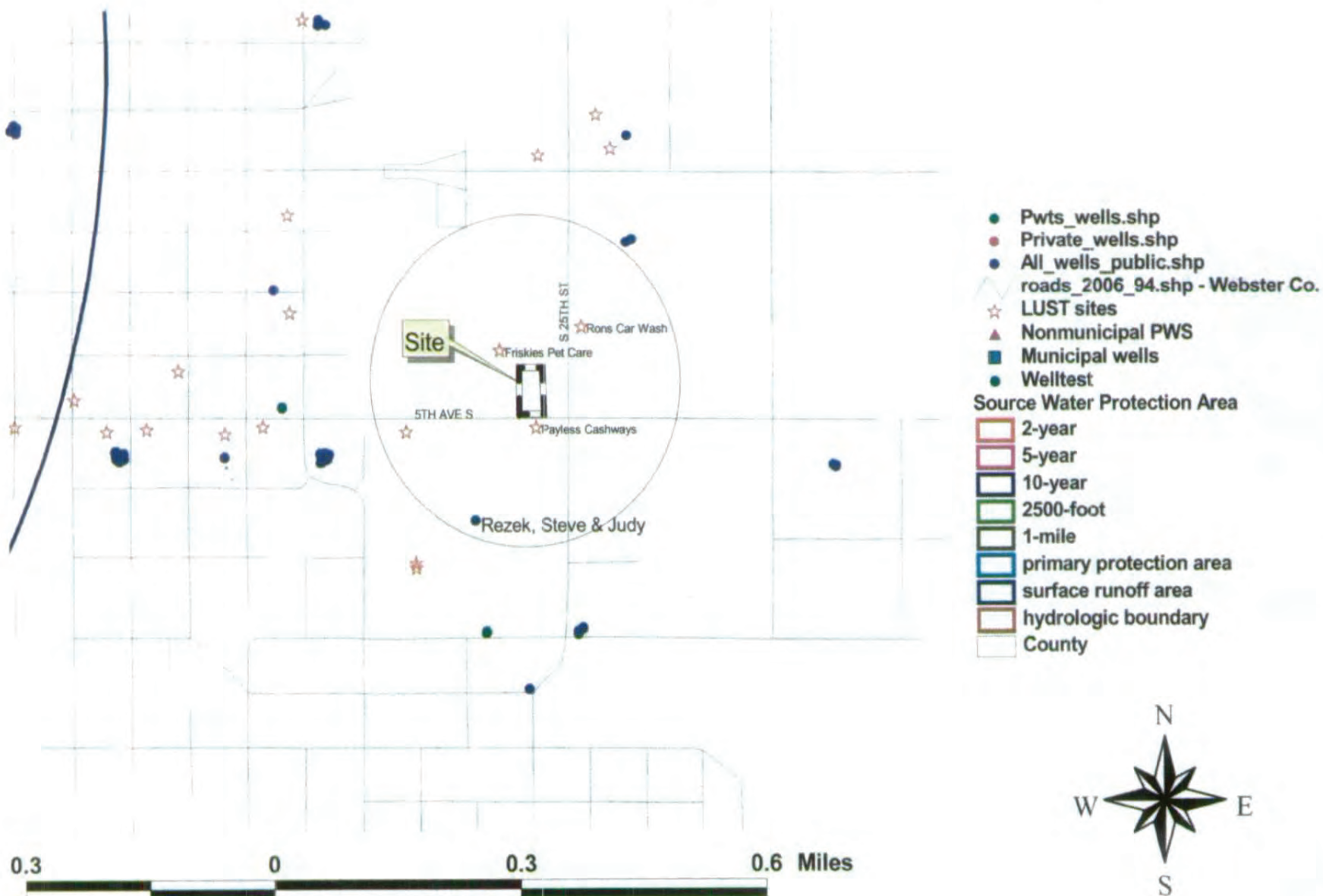
Form Reviewed:



Date Reviewed:

7/10/08

Sunshine Laundry, Fort Dodge



BARKERLEMAR

ENGINEERING CONSULTANTS

CON 12-15
Doc # 22874

**Site Assessment &
Remedial Action Plan**
Sunshine Laundry
2422 5th Avenue South
Fort Dodge, Iowa
Project No. SNSHN 09000
June 2010

1801 Industrial Circle, West Des Moines, Iowa 50265
(515) 256-8814 Fax (515) 256-0152

Sid called 12:10 pm 8/2/10
cell - 515-402-5625
515-256-8814
return call 8/2/10 1:30 pm

BARKER LEMAR
ENGINEERING CONSULTANTS

June 21, 2010

Ms. Jyoti Raval
Sunshine Company, LC
2209 Burleigh Street, Apt #306
Yankton, SD 57078

RE: Site Assessment & Remedial Action Plan
Sunshine Laundry
2422 5th Avenue South
Fort Dodge, IA
BARKER LEMAR Project Number SNSHN 09000

Dear Ms. Raval:

BARKER LEMAR CONSULTING ENGINEERS (BARKER LEMAR) has completed a Site Assessment and Remedial Action Plan for the above-referenced site. The site is located at 2422 5th Avenue South, Fort Dodge. Assessment work was conducted by **BARKER LEMAR** to satisfy environmental assessment requirements required by the Iowa Department of Natural Resources (IDNR) Contaminated Sites Section.

1.0 BACKGROUND

The subject property is located at 2422 5th Avenue South in Fort Dodge, Iowa. The property is doing business as Sunshine Laundry, which offers self service and drop-off laundry services. Dry cleaning activities are not presently being conducted at the site. A Phase I Environmental Site Assessment (ESA I) was conducted for the property by Burns and McDonnell Engineering Company (Burns and McDonnell) for Nestle Purina Pet Care Company, in January 2008. The ESA I report obtained from the IDNR by **BARKER LEMAR**, identified use of dry cleaning solvents at the site during operation as a dry cleaning facility from 1984 to 1992.

A Phase II Environmental Site Assessment (ESA II) was conducted by Burns and McDonnell in March 2008. The ESA II report dated April 15, 2008, was obtained from the IDNR by **BARKER LEMAR**. Soil and groundwater from ten (10) direct push locations were analyzed in an attempt to determine impact to the site by volatile organic compounds (VOCs). Two permanent sub-slab vapor sampling probes were installed beneath the existing building floor.

The assessments conducted previously at the site have been discussed in detail in Section 2.0 on the following page.

2.0 SUMMARY OF PREVIOUS INVESTIGATIONS

2.1 PHASE I ENVIRONMENTAL SITE ASSESSMENT; BURNS AND McDONNELL; JANUARY 2008

Burns and McDonnell was retained by Nestle Purina Petcare Company (NPPC) to perform a ESA I at the subject property. City directories researched in the report identified the property as being occupied by Rainbow Laundry and Dry Cleaning from 1986 to 1991. Documents provided by the EPA Region VII offices indicated that dry cleaning operations were conducted on the subject property between 1984 and 1992. An EPA Complaint Investigation inspection in June 1992 found staining in a small shed and in/on an adjacent dumpster. Perchloroethylene (PCE) and used filters were reportedly stored in the shed, prior to disposal. The manager of the facility at the time indicated that PCE had leaked from buckets stored in the shed on some occasions. The site received a Letter of Warning from the EPA dated December 1992 that indicated that the EPA believed that improper disposal practices may have been followed at the site.

2.2 PHASE II ENVIRONMENTAL SITE ASSESSMENT; BURNS AND McDONNELL; APRIL 2008

Burns and McDonnell was retained by Nestle Purina Petcare Company (NPPC) to perform a ESA II at the subject property. Soil and groundwater from ten (10) direct push locations were sampled in an attempt to determine impact to the site by VOCs. Two permanent sub-slab vapor sampling probes were installed beneath the existing building floor. PCE above the statewide standard for soil was detected in one soil sample (DP-9); located approximately fifty (50) feet north of the existing building. PCE, Trichloroethylene (TCE), Dichloroethylene (DCE) and Vinyl Chloride were detected in one or more groundwater samples as summarized in the ESA II report prepared by Burns and McDonnell dated April 15, 2008, and the Initial Site Screening report prepared by the IDNR dated July 10, 2008.

3.0 SCOPE OF BARKER LEMAR ASSESSMENT

Based on the results of the subsurface investigation conducted by Burns and McDonnell in April 2008, the Iowa Department of Natural Resources (IDNR) requested a work plan in a letter dated June 16, 2008. BARKER LEMAR Senior Project Manager, Sid Juwarker, met with IDNR Project Manager, Hylton Jackson, and the preliminary scope of the assessment was discussed. BARKER LEMAR submitted a work plan dated July 22, 2008, to the IDNR Contaminated Site Section which was approved on July 23, 2009.

The work plan proposed the following scope of services:

Installation of six borings to be completed as groundwater monitoring wells for the purposes of defining the soil and groundwater VOC plumes at the site. Borings were to be advanced to 20 feet below ground surface (bgs). Sample locations included one (1) location north, one (1) location west, and one (1) location east of soil and groundwater PCE source location, DP-9, one (1) location southwest of former location DP-4 and DP-3, one (1) offsite location south of DP-2 and DP-1, and one (1) location west of the existing building and soil vapor sample SVP-1. Hydraulic conductivity testing to be conducted on three of the newly installed monitoring wells to determine aquifer conductivity. The three wells to be selected so that the source area around former location DP-9 would be triangulated.

BARKER LEMAR was retained by site owner Jyoti Raval on December 23, 2009, to complete the Site Investigation at the Sunshine Laundry site and prepare a Remedial Action Plan.

4.0 SITE INVESTIGATION

4.1 SOIL BORING AND MONITORING WELL INSTALLATION – JANUARY 18-19, 2010.

Four soil borings were advanced and completed as monitoring wells designated MW-1 through MW-4 on January 18 and 19, 2010, in accordance with the IDNR approved work plan. The location of the borings/groundwater monitoring wells is shown on the site map included as Figure 1.

Borings MW-1, MW-2, and MW-3 were advanced to 20 feet bgs, north, west, and east of April 2008 ESA II soil and groundwater PCE source location, DP-9, respectively. Soil samples from the borings were examined in the field for indication of contamination by noting odors, discoloration, and the presence of a sheen.

Soil samples were collected from each boring at approximately 1-foot intervals throughout the length of the borings using a split spoon sampler. A photoionization detector (PID) was used to monitor vapor readings in the soil samples. The field screening readings for the site were measured using a Model 580B Organic Vapor Meter (OVM) manufactured by Thermo

Environmental Instruments, Inc. The OVM uses a photoionization lamp with 10.6 eV of ionization energy. Isobutylene gas was used to calibrate the meter; the OVM readings displayed represent a qualitative measure of the parts per million (ppm) of the organic vapor and not a quantitative measure.

Field screening readings were zero throughout the length of soil boring MW-1. PID readings were detected in soil borings MW-2, between 3-12 feet bgs, with the maximum reading encountered at 11 feet bgs (6 ppm); and MW-3, between 2-14 feet bgs, with the maximum reading encountered at 3 feet bgs (17.8 ppm). Soil samples were collected from each of the three borings and submitted to a certified laboratory for analysis of PCE, TCE, DCE, and Vinyl Chloride by EPA Method 8260. Soil samples from MW-2 and MW-3 were collected from the intervals exhibiting the maximum field screening reading. The soil sample from MW-1 was collected at 9 feet bgs which was the assumed groundwater/soil interface at the time of drilling.

Boring MW-4 was advanced southwest of former location DP-4 and west of location DP-3, and completed as a monitoring well. The purpose of MW-4 was to bracket the groundwater plume southwest of DP-4 that exhibited groundwater concentrations of PCE and DCE in excess of statewide standards during the April 2008 ESA II. No soil samples were collected from MW-4.

The soil samples were transferred into appropriate laboratory prepared and provided sample containers with appropriately lined lids. The containers were labeled and packed in an insulated container with artificial refrigeration for shipment to a state certified laboratory. Soil boring logs and monitoring well construction diagrams are included in Attachment A.

4.2 HYDRAULIC CONDUCTIVITY TESTING & GROUNDWATER SAMPLING – JANUARY 28-29, 2010.

Hydraulic conductivity testing was conducted at the site on January 28, 2010, to determine if the site is a protected groundwater source. A protected groundwater source is a formation which has a hydraulic conductivity of at least 0.44 meters per day (m/d).

Hydraulic conductivity is a measure of the capacity of a porous medium (rock or soil) to transmit water. It relates the specific discharge (volume per unit area) flowing through a porous material to the gradient (change in hydraulic head per unit distance). Acceptable data for the computation of hydraulic conductivity (K) was generated by performing small volume slug tests on monitoring wells MW-1, MW-3, and MW-4 at the site. The location of the wells serves to triangulate the site and includes the April 2008 ESA II soil and groundwater source area DP-9.

To collect the hydraulic conductivity data the initial static water level and total depth of the well was measured using an electronic water level indicator. A Troll pressure transducer/data logger assembly was lowered into the well to approximately 5 feet below the measured static water level but not in contact with the bottom of the well and static water level measurements were collected using the data logger to confirm that the water level or head pressure measurements from the data logger were correct. A one liter bailer was slowly introduced in the well taking care to prevent a fluctuation in the static water level. Once stable, a slug volume of one liter was removed by quickly retrieving the bailer and static water level was manually measures to confirm the drawdown. Data collection was continued with the data logger until the water level recharged approximately 90% of the drawdown or for approximately 30 minutes. At the end of the test, the water level was manually measured and compared to the initial static water level to confirm the recovery. Following completion of the test, the pressure transducers and water level meters were removed from the well and decontaminated with Alconox prior to reintroducing in another monitoring well onsite.

This actual computation of K was performed utilizing the Bouwer-Rice slug test data reduction method (Bouwer, H., 1989, The Bouwer and Rice Slug Test - An Update, Groundwater, Vol.27, No. 3, pg. 304-309.) by entering the collected field data into the IDNR approved BRSulg software. Key well and aquifer parameters associated with the software-assisted computation of K included, the radius of the well casing, saturated thickness of the aquifer, vertical height of water in the test well, and length of screen through which water may enter the well. The effective casing radius, which is used to account for the thickness and porosity of the filter pack, was calculated by the software using a default value of 15% for gravel pack porosity.

The best fit line was adjusted to exclude the initial data points which may be attributed to drainage of the filter pack. The adjusted line also excluded the data which deviates from the straight line as time increases, i.e., recovery greater than 90% of initial draw down. Units for hydraulic conductivity were reported in meters per day (m/day).

Based on the hydraulic conductivity measurements collected at the site the monitoring wells MW-1 (0.548 m/day) and MW-3 (0.481 m/day) exhibited hydraulic conductivity values in excess of 0.44 m/day. Monitoring well MW-4 exhibited a hydraulic conductivity value of 0.193 m/day. The maximum value of 0.548 m/day collected from MW-1 was used for this assessment and the site is considered a protected groundwater source. Hydraulic conductivity data is included as Attachment C of this report.

Following completion of hydraulic conductivity testing, the onsite monitoring wells were purged of three well volumes and allowed to recover overnight. Groundwater samples were collected from monitoring wells MW-1, MW-2, MW-3, and MW-4 on January 29, 2010. Groundwater samples were collected using clean disposable bailers, poly string, and disposable gloves. The samples were visually inspected for the presence of emulsions or chemical sheens. Samples were transferred to laboratory cleaned containers, iced, and shipped to Keystone Laboratories for analysis of PCE, TCE, DCE, and Vinyl Chloride by EPA Method 8260.

4.3 MONITORING WELL INSTALLATION – APRIL 22, 2010.

Two soil borings were advanced and completed as monitoring wells designated MW-5 and MW-6 on April 22, 2010, in accordance with the IDNR approved work plan. The location of the borings/groundwater monitoring wells is shown on the site map included as Figure 1. These wells were unable to be installed in January 2010 due to presence of snow preventing access and utility clearance in the respective locations.

Borings MW-5 and MW-6 were advanced to 10 feet bgs. Monitoring well MW-5 was installed south of April 2008 ESA II locations DP-2 and DP-1 to bracket the groundwater plume south of DP-2 that exhibited groundwater concentrations of PCE in excess of statewide standards during the April 2008 ESA II. No soil samples were collected from MW-5.

Monitoring well MW-6 was installed west of the existing building and April 2008 ESA II soil vapor sample SVP-1. Soil samples were collected from MW-6 at approximately 1-foot intervals throughout the length of the borings using a hand auger as drill rig access was limited due to the presence of the building and fence, as well as a buried electrical utilities from the pad mounted transformer in the vicinity of MW-6. A PID was used to monitor vapor readings in the soil samples. PID readings were detected in soil borings MW-6 between 1-10 feet bgs, with the maximum reading encountered at 9 feet bgs (0.8 ppm). A soil sample was collected from MW-6 and submitted to a certified laboratory for analysis of PCE, TCE, DCE, and Vinyl Chloride by EPA Method 8260.

Following completion of drilling and well installation activities, the wells were purged of three well volumes. Groundwater samples were collected from monitoring wells MW-5 and MW-6 on April 22, 2010. Groundwater samples were collected using clean disposable bailers, poly string, and disposable gloves. The samples were visually inspected for the presence of emulsions or chemical sheens. Samples were transferred to laboratory cleaned containers, iced, and shipped to Keystone Laboratories for analysis of PCE, TCE, DCE, and Vinyl Chloride by EPA Method 8260.

5.0 ANALYTICAL RESULTS

5.1 SOIL ANALYTICAL RESULTS

Analytical laboratory results and chain-of-custody forms for soil samples are included in Attachment B. The analytical results indicated PCE, TCE, DCE, and Vinyl Chloride concentrations were below laboratory detection limits or Iowa Statewide Standards in the soil samples from MW-1, MW-2, MW-3, and MW-6. Analytical results are summarized in Table 1.

5.2 GROUNDWATER ANALYTICAL RESULTS

Analytical laboratory results and chain-of-custody forms for groundwater samples are included in Attachment B and groundwater analytical results are summarized in Table 2. The analytical results indicated PCE, TCE, DCE, and Vinyl Chloride concentrations were above Iowa Statewide Standards for protected groundwater in the groundwater sample from MW-3 located east of April 2008 ESA II PCE groundwater location DP-9.

Analytical results indicated PCE concentrations were above Iowa Statewide Standards for protected groundwater in the groundwater samples from MW-2, MW-4, MW-5, and MW-6. Analytical results indicated TCE concentrations were above Iowa Statewide Standards for protected groundwater in the groundwater samples from MW-1, MW-2, MW-3, and MW-6.

5.3 SOIL AND GROUNDWATER PLUME MAPS

The analytical results of the soil and groundwater sampling and hydraulic conductivity testing conducted at the site were put into the IDNR Risk Based Corrective Action (RBCA) software for Leaking Underground Storage Tanks (LUST) to generate groundwater plume maps. For the purposes of this assessment, software default values for fractional organic carbon, total porosity and soil bulk density were used. The head gradient was calculated using the static water levels and distances between MW-1/MW-3 and MW-1/MW-4 and averaged for the site. The groundwater plumes were defined to the statewide standard or to the lowest level needed to obtain a closed plume for spatial representation of groundwater contamination. The soil plumes were defined to the Iowa Statewide Standard for each of the chemicals of concern. Groundwater plume maps are included as Figures 2A through 2E of this report. Soil plume maps are included as Figures 3A through 3E of this report.

6.0 CORRECTIVE ACTION RECCOMENDATIONS

6.1 SOIL CONTAMINATION

Based on data collected during the ESA II conducted by Burns and McDonnell in April 2008, and the Site Investigation conducted by **BARKER LEMAR** in January and April 2010, soil contamination in excess of Iowa State Standards exist at the DP-9 location north of the site building. Location DP-9 drilled as part of the April 2008 ESA II exhibited a PCE concentration of 22.1 mg/kg which is in excess of the Iowa Statewide Standard of 5.7 mg/kg. The DP-9 location is adequately bracketed by soil borings MW-1, MW-2, and MW-3 installed by **BARKER LEMAR** in January 2010, to the north, east, and west; and borings DP-4 through DP-8 to the southeast, south and southwest installed as part of the April 2008 ESA II conducted by Burns and McDonnell.

Based on the elevated sub-slab soil vapor concentrations of PCE observed in SVP-2 (630,000 $\mu\text{g}/\text{m}^3$), it is assumed that some soil contamination may exist beneath the floor slab of the existing building in the location of SVP-2. The soil PCE plume at this location has been adequately bracketed by MW-6 to the east and DP-5 to the north. Elevated vapor concentrations were not observed in SVP-1 which was installed as a sub-slab vapor monitoring location to the west of SVP-2.

BARKER LEMAR recommends excavation and disposal of the PCE impacted soil in the DP-9 location as the cost effective approach to addressing the soil contamination at the site. The assumed soil PCE plume is shown on Figure 3A. The excavation would be backfilled with a granular backfill material to allow for the in-situ treatment of impacted groundwater if required. Excavation is not recommended in the vicinity of SVP-2 as this would affect the structural stability of the building onsite. PCE impacted soil beneath the building floor slab in the vicinity of SVP-2, if any, may be addressed via soil vapor extraction in conjunction with the in-situ treatment of impacted groundwater discussed in Section 6.2 below.

6.2 GROUNDWATER CONTAMINATION

Based on data collected during the ESA II conducted by Burns and McDonnell in April 2008, and the Site Investigation conducted by **BARKER LEMAR** in January and April 2010, the groundwater source locations are as follows: PCE - DP-9 (2.140 mg/L), TCE - MW-3 (0.281 mg/L), DCE - MW-3 (1.11 mg/L), and Vinyl Chloride - MW-3 (0.0062 mg/L).

Analytical results indicated PCE concentrations were above Iowa Statewide Standards for protected groundwater in the groundwater samples from DP-2, DP-3, DP-4, DP-5, DP-6, DP-7, DP-8, DP-9, MW-2, MW-4, MW-5, and MW-6. Analytical results indicated DCE concentrations were above Iowa Statewide Standards for protected groundwater in the groundwater samples from DP-4, DP-6, DP-8, and DP-9. Analytical results indicated TCE concentrations were above Iowa Statewide Standards for protected groundwater in the groundwater samples from DP-6, DP-8, MW-1, MW-2, MW-3, and MW-6. Analytical results indicated Vinyl Chloride concentrations were above Iowa Statewide Standards for protected groundwater in the groundwater samples from DP-8 and MW-3. Groundwater plume maps are included as Figures 2A through 2E of this report.

BARKER LEMAR recommends treatment of impacted groundwater at the site via excavation and in-situ air sparging and soil vapor extraction (SVE). A proposed excavation in the DP-9 location discussed in Section 6.1 above would serve to reduce groundwater concentrations in the vicinity of DP-9 and MW-3 which represent the PCE, DCE, TCE, and Vinyl Chloride source areas. Following removal of the soil leaching source at DP-9, residual groundwater contamination in other areas of the site, if needed, can be addressed via a in-situ treatment system designed to operate primarily within an engineered backfill area around DP-9 and extending south towards MW-5 (addressing areas DP-2, DP-3, DP-4, and MW-4; and southeast toward MW-6 (addressing areas DP-5, DP-6, DP-7, DP-8, and SVP-2).

If groundwater contamination is observed following excavation and groundwater sampling conducted following post-excavation stabilization, usually 6 months, in-situ treatment of impacted groundwater would address remaining impacted groundwater. Due to the shallow groundwater at the site (less than 5 feet bgs), a horizontal SVE manifold around a set of low flow air sparge points installed in areas outside the excavation area is the recommended approach.

7.0 GENERAL COMMENTS

The analysis and opinions expressed in this report are based upon data obtained from site activities performed at the indicated locations and from any other information discussed in this report. This report does not reflect any variations or anomalies that may occur between survey points or across the site. Actual subsurface conditions may vary and may not become evident without further exploration.

BARKER LEMAR has prepared this report for the exclusive use of our client for the specific application to the project discussed, and the report has been prepared in accordance with generally accepted environmental engineering practices. No warranties, either express or implied, are intended or made. In the event any changes in the nature or location of suspected subsurface conditions, as outlined in this report, are observed, the conclusions contained herein cannot be considered valid unless changes are reviewed and the opinions of this report are modified or verified in writing by **BARKER LEMAR ENGINEERING CONSULTANTS**.

BARKER LEMAR
ENGINEERING CONSULTANTS

We appreciate the opportunity to be of service to you on this project. If you have any questions regarding the information contained in this report, please contact us at (515) 256-8814.

Sincerely,
BARKER LEMAR ENGINEERING CONSULTANTS



Sid Juwarker, CGP
Senior Project Manager
sjuwarker@barkerleamar.com



Leah Calvert, PG
Professional Geologist
lcalvert@barkerleamar.com

A vertical dashed line consisting of 20 short, thick black horizontal bars spaced evenly along the left margin of the page.

Laboratory Analysis Summary Tables

TABLE 1
SUMMARY OF SOIL SAMPLING
VOLATILE ORGANIC COMPOUNDS - EPA METHOD 8260
Sunshine Laundry
2422 5th Avenue South
Fort Dodge, Iowa
Barker Lemar Project No. SNSHN 09000

Analytes	Units	Action Level	MW-1 1/18/2010	MW-2 1/19/2010	MW-3 1/19/2010	MW-6 4/22/2010
cis-1,2-Dichloroethylene	mg/kg	760	<0.002	0.006	0.01	0.018
Tetrachloroethylene	mg/kg	5.7	<0.002	0.028	<0.002	0.043
trans-1,2-Dichloroethylene	mg/kg	1500	<0.002	<0.002	0.01	0.027
Trichloroethylene	mg/kg	7.7	<0.002	0.003	<0.002	0.063
Vinyl Chloride	mg/kg	2.1	<0.002	<0.002	<0.002	<0.002

Notes:

<- Indicates less than laboratory reporting limit
 mg/kg Indicates micrograms per kilogram
 Action Level- Statewide Standards for Soil

Reference:

Statewide Standards for Soil, DNR Contaminated Sites Section
 Current as of May 13, 2010

TABLE 2
SUMMARY OF GROUNDWATER SAMPLING
VOLATILE ORGANIC COMPOUNDS - EPA METHOD 8260
Sunshine Laundry
2422 5th Avenue South
Fort Dodge, Iowa
Barker Lemar Project No. SNSHN 09000

Analytes	Units	Action Level	MW-1 1/29/2010	MW-2 1/29/2010	MW-3 1/29/2010	MW-4 1/29/2010	MW-5 4/22/2010	MW-6 4/22/2010
cis-1,2-Dichloroethylene	mg/L	0.07 / 0.35	0.0201	0.0468	1.11	0.0029	<0.002	0.0035
Tetrachloroethylene	mg/L	0.005 / 0.025	0.0028	0.0578	1.97	0.0073	0.111	0.0753
trans-1,2-Dichloroethylene	mg/L	0.1 / 0.7	0.0037	0.0137	0.518	0.0014	<0.002	0.0025
Trichloroethylene	mg/L	0.005 / 0.025	0.006	0.0108	0.281	0.0011	0.0045	0.0051
Vinyl Chloride	mg/L	0.002 / 0.01	<0.001	<0.001	0.0062	<0.001	<0.002	<0.002

Notes:

<- Indicates less than laboratory reporting limit

mg/L Indicates milligrams per liter

Action Level- Statewide Standards for groundwater (protected / non-protected)

Bold: concentrations above protected groundwater standards only

Bold: concentrations above protected and non-protected groundwater standards

Reference:

Statewide Standards for Groundwater, DNR Contaminated Sites Section
Current as of May 13, 2010

April 2008 Phase II – Analytical Summary Tables

Source: July 2008 IDNR Brownfield Initial Site Screening

Groundwater:

PCE; TCE; Cis-1,2-DCE; Trans-1,2-DCE; 1,2-DCE; and VC were detected in one or more groundwater samples above their applicable Statewide Standard. No other groundwater contaminants were detected above the applicable Statewide Standard. See Table below
Concentrations that exceed the Statewide Standard in **Bold**

Sample Location	Contaminant (mg/L)							
	PCE	TCE	1,2-DCE	Cis-1,2-DCE	Trans-1,2-DCE	1,2,4-Trimethyl benzene	VC	Chloroethane
DP-1	0.012	ND	ND	ND	ND	ND	ND	ND
DP-2	0.034	ND	ND	ND	ND	ND	ND	ND
DP-3	0.0664	ND	ND	ND	ND	ND	ND	ND
DP-4	0.190	ND	0.0264	0.0243	0.0021	ND	ND	ND
DP-5	0.0248	ND	ND	ND	ND	ND	ND	ND
DP-6	1.040	0.0379	0.0070	0.0070	ND	ND	ND	ND
DP-7	0.511	ND	ND	ND	ND	ND	ND	ND
DP-8	0.178	0.103	0.440	0.302	0.139	ND	0.0023	0.0014
DP-9/Dup-1	2.140	0.0048	0.0099	0.0069	0.0030	0.0013	ND	ND
DP-10	ND	ND	ND	ND	ND	ND	ND	ND
Statewide Standard* (mg/L)	.005	.005	.005	.07	.1	.35	.002	NA

*Statewide Standard for Protected Groundwater

ND - Compound not detected above laboratory detection limits

Summarize the findings and conclusions regarding the contaminants found and their extent and concentrations. Relate those values to known criteria such as statewide standards, MCLs, water quality standards, background levels or other benchmarks used to determine site priority.

Soil:

PCE was detected in one soil sample above Statewide Standard. TCE, Cis-1,2-Dichloroethane (Cis-1,2-DCE), Trans-1,2-Dichloroethane (Trans-1,2-DCE), and 1,2-Dichloroethane (1,2-DCE) were detected in one or more soil samples below their applicable Statewide Standard. No other soil contaminants were detected above laboratory detection limits. See Table below.

Concentrations that exceed the Statewide Standard in **Bold**

Sample Location	Contaminant (mg/kg)				
	PCE	TCE	Cis-1,2-DCE	Trans-1,2-DCE	1,2-DCE
DP-1 (Dup)	0.319	0.008	0.0106	ND	0.0135
DP-2	0.034	ND	ND	ND	ND
DP-3	ND	ND	ND	ND	ND
DP-4	1.850	ND	ND	ND	ND
DP-5	0.0167	ND	ND	ND	ND
DP-6	0.291	ND	ND	ND	ND
DP-7	ND	ND	ND	ND	ND
DP-8	0.262	0.0105	0.0148	ND	0.0194
DP-9	22.1	0.052	ND	ND	ND
DP-10	ND	ND	ND	ND	ND
Statewide Standard (mg/kg)	5.7	7.7	760	1500	34

ND - Compound not detected above laboratory detection limits

Groundwater:

PCE; TCE; Cis-1,2-DCE; Trans-1,2-DCE; 1,2-DCE; and VC were detected in one or more groundwater samples above their applicable Statewide Standard. No other groundwater contaminants were detected above the applicable Statewide Standard. See Table below
Concentrations that exceed the Statewide Standard in **Bold**

Sample Location	Contaminant (mg/L)							
	PCE	TCE	1,2-DCE	Cis-1,2-DCE	Trans-1,2-DCE	1,2,4-Trimethyl benzene	VC	Chloroethane
DP-1	0.012	ND	ND	ND	ND	ND	ND	ND
DP-2	0.034	ND	ND	ND	ND	ND	ND	ND
DP-3	0.0664	ND	ND	ND	ND	ND	ND	ND
DP-4	0.190	ND	0.0264	0.0243	0.0021	ND	ND	ND
DP-5	0.0248	ND	ND	ND	ND	ND	ND	ND
DP-6	1.040	0.0379	0.0070	0.0070	ND	ND	ND	ND
DP-7	0.511	ND	ND	ND	ND	ND	ND	ND
DP-8	0.178	0.103	0.440	0.302	0.139	ND	0.0023	0.0014
DP-9/Dup-1	2.140	0.0048	0.0099	0.0069	0.0030	0.0013	ND	ND
DP-10	ND	ND	ND	ND	ND	ND	ND	ND
Statewide Standard* (mg/L)	.005	.005	.005	.07	.1	.35	.002	NA

*Statewide Standard for Protected Groundwater

ND - Compound not detected above laboratory detection limits

Figure 1
Site Map and Sampling Locations



LEGEND



MW-1

APPROXIMATE MONITORING WELL
LOCATION - BARKER LEMAR



BH-1

APPROXIMATE LOCATION OF
BOREHOLE - INSTALLED MARCH 2008



SG-1

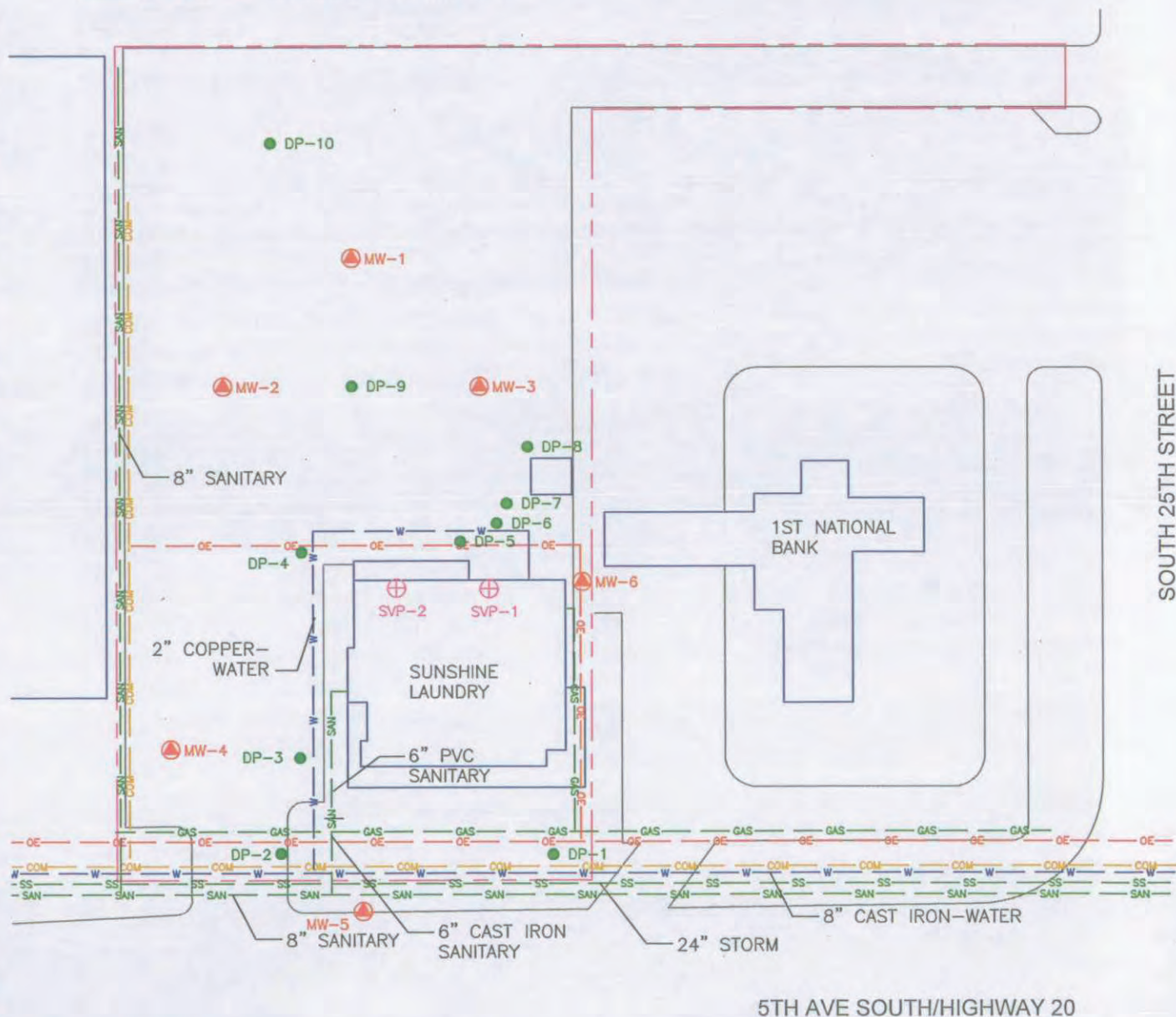
APPROXIMATE LOCATION OF SOIL GAS
WELL - INSTALLED MARCH 2008

— GAS — NATURAL GAS LINE
— COM — COMMUNICATIONS CABLE
- - - PROPERTY BOUNDARY
— OE — OVERHEAD ELECTRIC LINE

— W — WATER SUPPLY
— SAN — SANITARY SEWER
— SS — STORM SEWER

SCALE

0 50 FT.



SITE MAP
SUNSHINE LAUNDRY
FORT DODGE, IOWA
PROJECT NO: SNSHN 09000
DRAWING DATE: APRIL 2010

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FIGURE

1

Figures 2A through 2E
Groundwater Contamination Plume Maps



LEGEND

SCALE

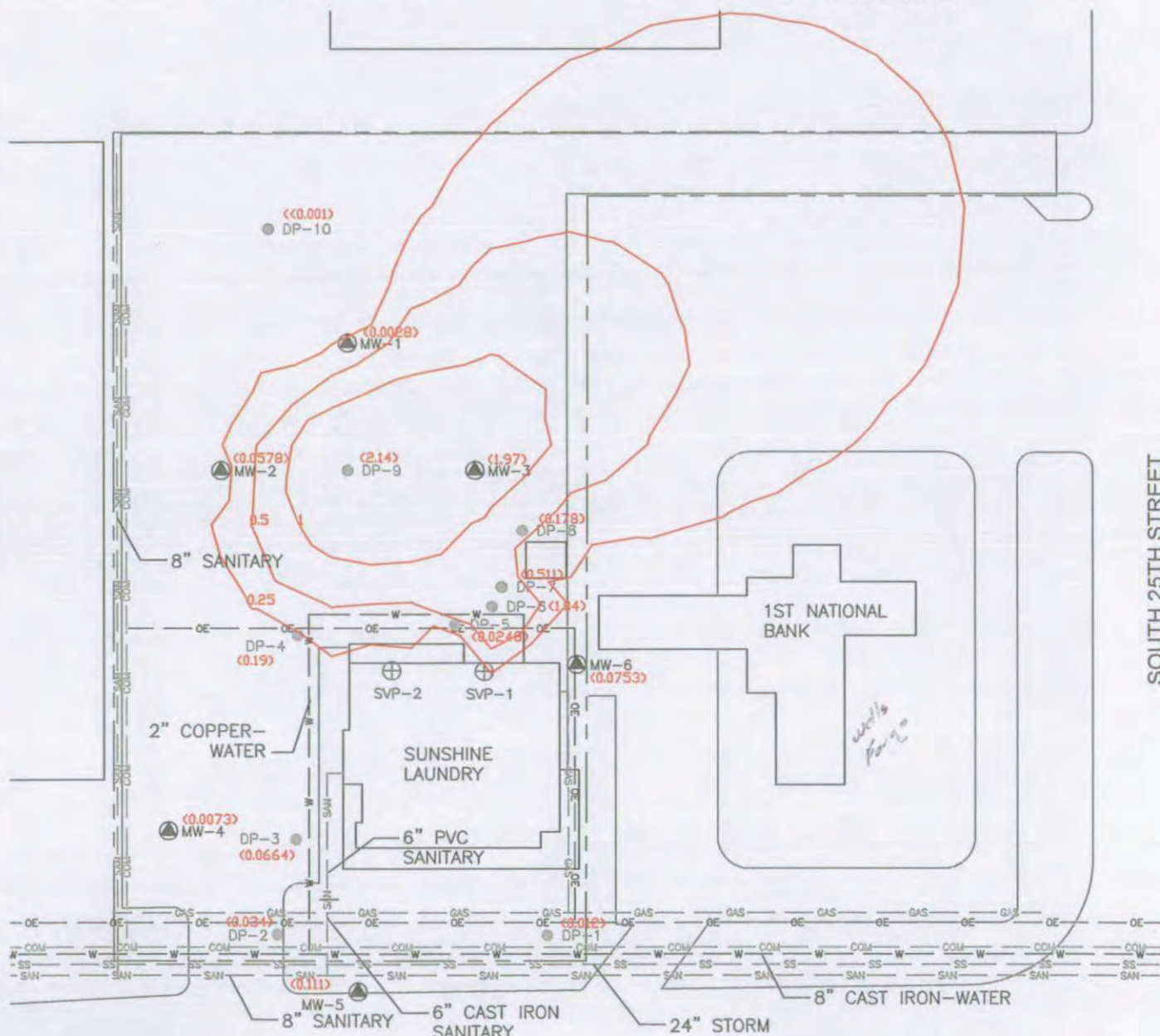
0 50 FT.



— GAS — NATURAL GAS LINE
— COM — COMMUNICATIONS CABLE
- - - - - PROPERTY BOUNDARY
— OE — OVERHEAD ELECTRIC LINE

⊙ MW-1 APPROXIMATE MONITORING WELL LOCATION - BARKER LEMAR
● BH-1 APPROXIMATE LOCATION OF BOREHOLE - INSTALLED MARCH 2008
⊕ SG-1 APPROXIMATE LOCATION OF SOIL GAS WELL - INSTALLED MARCH 2008

— W — WATER SUPPLY
— SAN — SANITARY SEWER
— SS — STORM SEWER



GW Plume Contours: PCE/TETRACHLOROETHYLENE
V-2.51,
2 (ug/L) greater than maximum interpolated value.
3 (ug/L) greater than maximum interpolated value.

5TH AVE SOUTH/HIGHWAY 20

GW - PCE/TETRACHLOROETHYLENE
SUNSHINE LAUNDRY
FORT DODGE, IOWA
PROJECT NO. SNSHN 09000
DRAWING DATE: JUNE 2010

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FIGURE

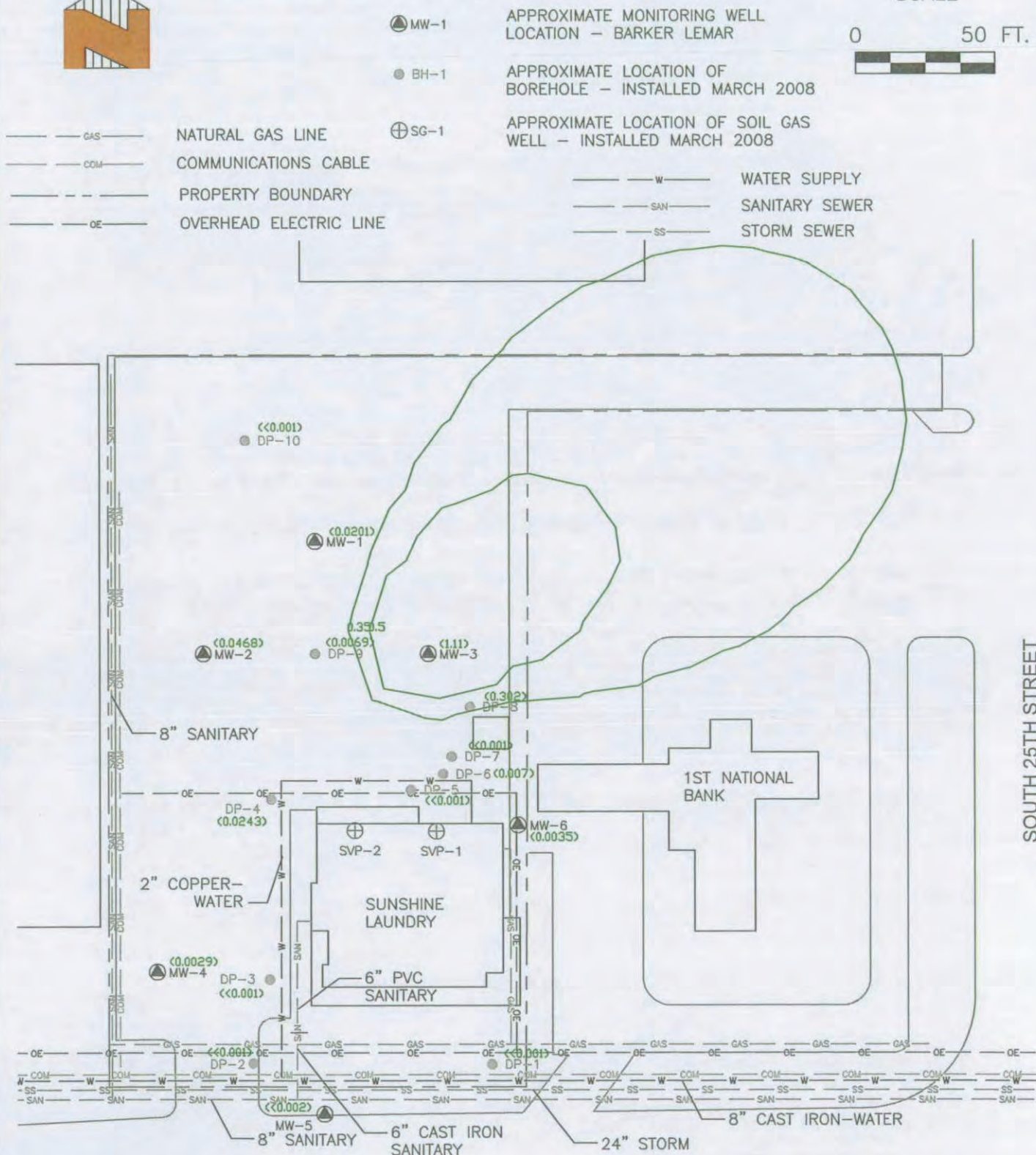
2A



LEGEND

SCALE

0 50 FT.



GW - CIS-1,2-DICHLOROETHYLENE
SUNSHINE LAUNDRY
FORT DODGE, IOWA
PROJECT NO. SNSHN 09000
DRAWING DATE: JUNE 2010

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FIGURE

2B



LEGEND

SCALE

0 50 FT.



APPROXIMATE MONITORING WELL
LOCATION - BARKER LEMAR



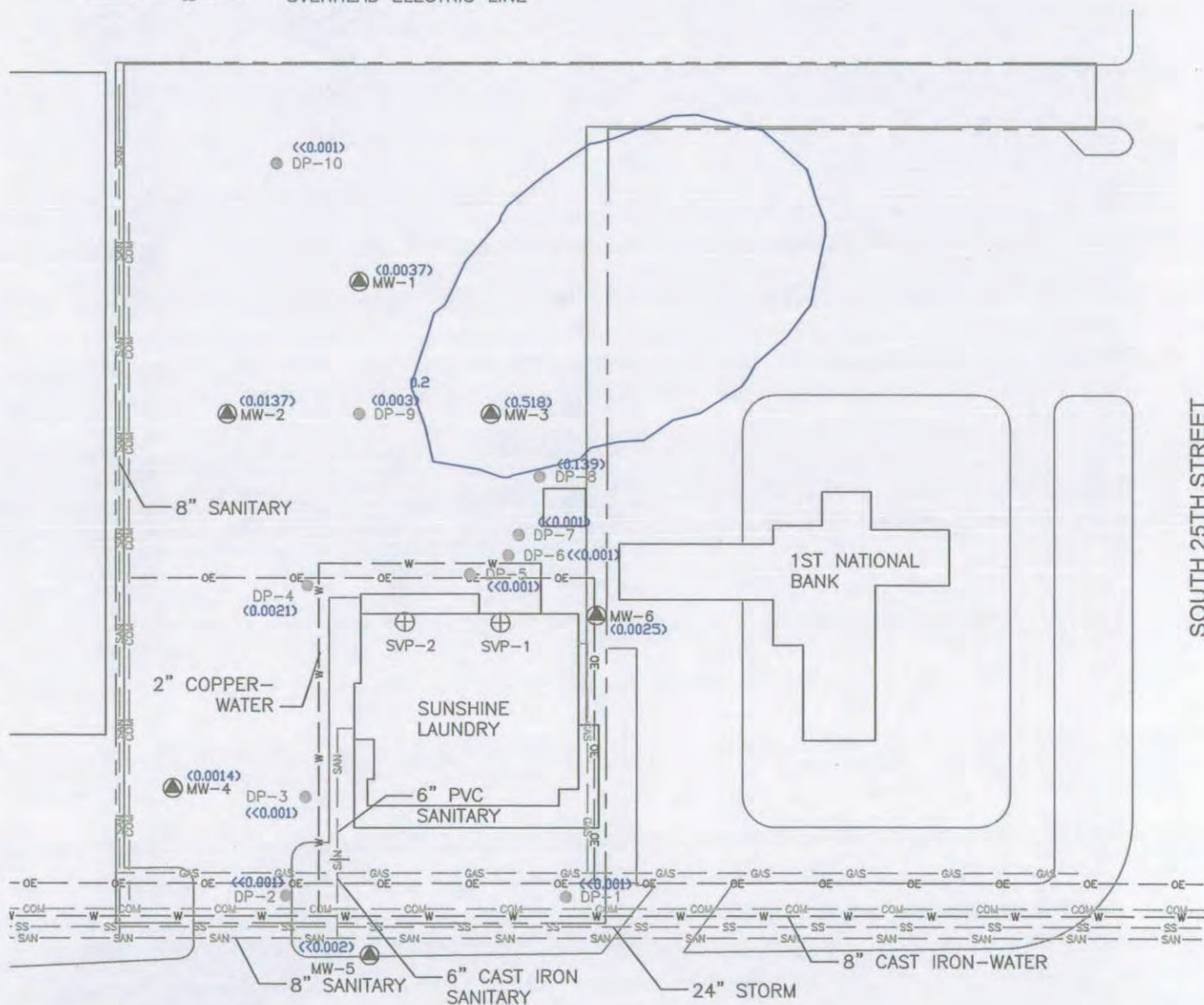
APPROXIMATE LOCATION OF
BOREHOLE - INSTALLED MARCH 2008



APPROXIMATE LOCATION OF SOIL GAS
WELL - INSTALLED MARCH 2008

— GAS — NATURAL GAS LINE
— COM — COMMUNICATIONS CABLE
- - - - - PROPERTY BOUNDARY
— OE — OVERHEAD ELECTRIC LINE

— W — WATER SUPPLY
— SAN — SANITARY SEWER
— SS — STORM SEWER



GW Plume Contours: TRANS-1,2-DICHLOROETHYLENE
V-2.51,

0.5 (ug/L) greater than maximum interpolated value.
0.7 (ug/L) greater than maximum interpolated value.

5TH AVE SOUTH/HIGHWAY 20

GW - TRANS-1,2-DICHLOROETHYLENE
SUNSHINE LAUNDRY
FORT DODGE, IOWA
PROJECT NO. SNSHN 09000
DRAWING DATE: JUNE 2010

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FIGURE

2C



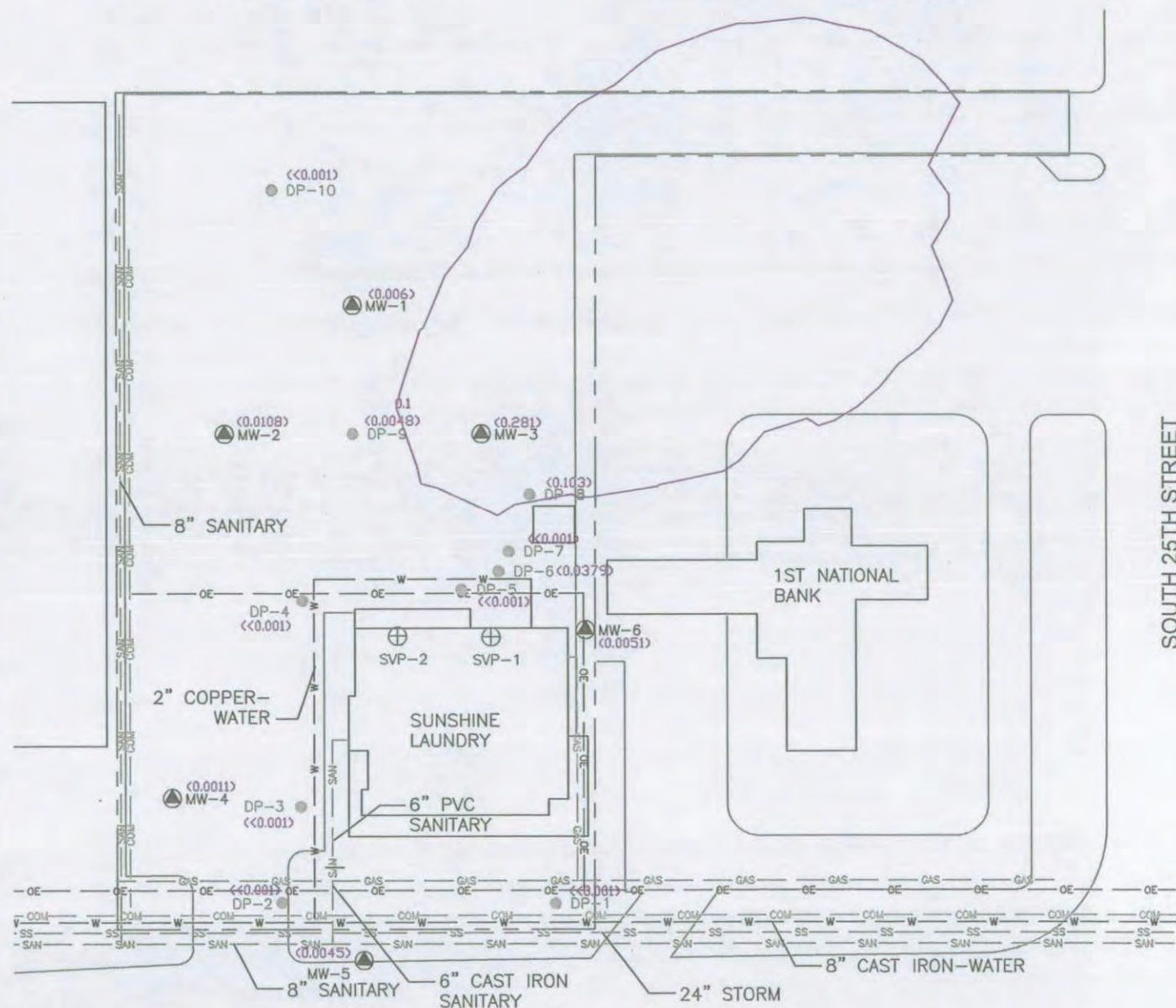
LEGEND

SCALE

0 50 FT.



— GAS —	NATURAL GAS LINE	⊕ MW-1	APPROXIMATE MONITORING WELL LOCATION - BARKER LEMAR
— COM —	COMMUNICATIONS CABLE	● BH-1	APPROXIMATE LOCATION OF BOREHOLE - INSTALLED MARCH 2008
---	PROPERTY BOUNDARY	⊕ SG-1	APPROXIMATE LOCATION OF SOIL GAS WELL - INSTALLED MARCH 2008
— OE —	OVERHEAD ELECTRIC LINE	— W —	WATER SUPPLY
		— SAN —	SANITARY SEWER
		— SS —	STORM SEWER



GW Plume Contours: TCE/TRICHLOROETHYLENE
V-2.51,

0.25 (ug/L) greater than maximum interpolated value.
0.5 (ug/L) greater than maximum interpolated value.

5TH AVE SOUTH/HIGHWAY 20

GW - TCE-TRICHLOROETHYLENE
SUNSHINE LAUNDRY
FORT DODGE, IOWA
PROJECT NO. SNSHN 09000
DRAWING DATE: JUNE 2010

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FIGURE

2D

SCALE

 MW-1

APPROXIMATE MONITORING WELL
LOCATION - BARKER LEMAR

● BH-1

APPROXIMATE LOCATION OF
BOREHOLE - INSTALLED MARCH 2008

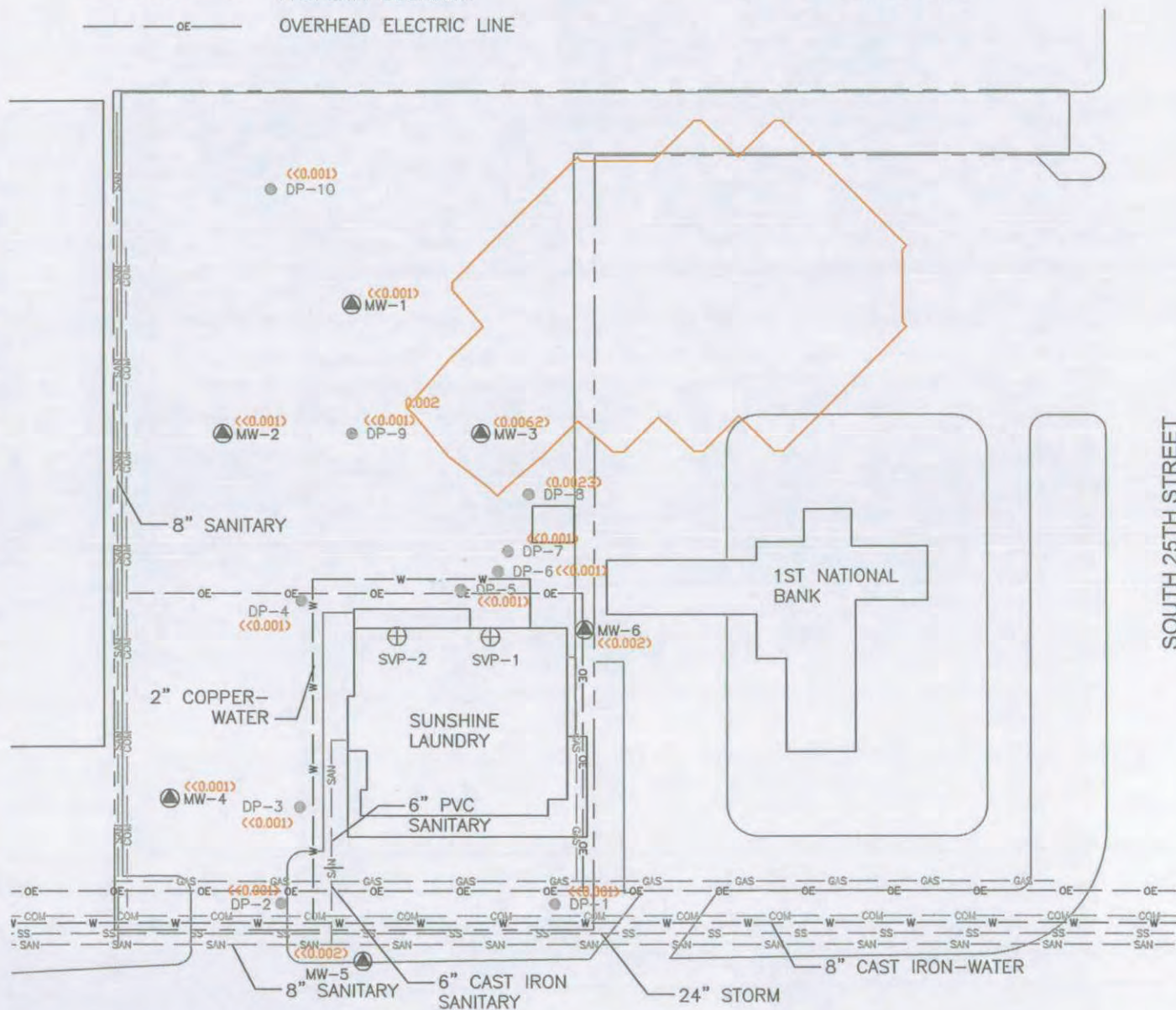
⊕ SG-1

APPROXIMATE LOCATION OF SOIL GAS
WELL - INSTALLED MARCH 2008

_____ GAS _____ NATURAL GAS LINE
 _____ COM _____ COMMUNICATIONS CABLE
 _____ - - - - - PROPERTY BOUNDARY
 _____ OE _____ OVERHEAD ELECTRIC LINE

———— W ———— WATER SUPPLY
 ———— SAN ———— SANITARY SEWER
 ———— SS ———— STORM SEWER

0 50 FT.



SOUTH 25TH STREET

GW Plume Contours: VINYL CHLORIDE/VC
V-2.51,

0.01 (ug/L) greater than maximum interpolated value.

5TH AVE SOUTH/HIGHWAY 20

GW - VINYL CHLORIDE-VC
SUNSHINE LAUNDRY
FORT DODGE, IOWA
PROJECT NO. SNSHN 09000
DRAWING DATE: JUNE 2010

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FIGURE

2E

**Figures 3A through 3E
Soil Contamination Plume Maps**



LEGEND



MW-1

APPROXIMATE MONITORING WELL
LOCATION - BARKER LEMAR



BH-1

APPROXIMATE LOCATION OF
BOREHOLE - INSTALLED MARCH 2008



SG-1

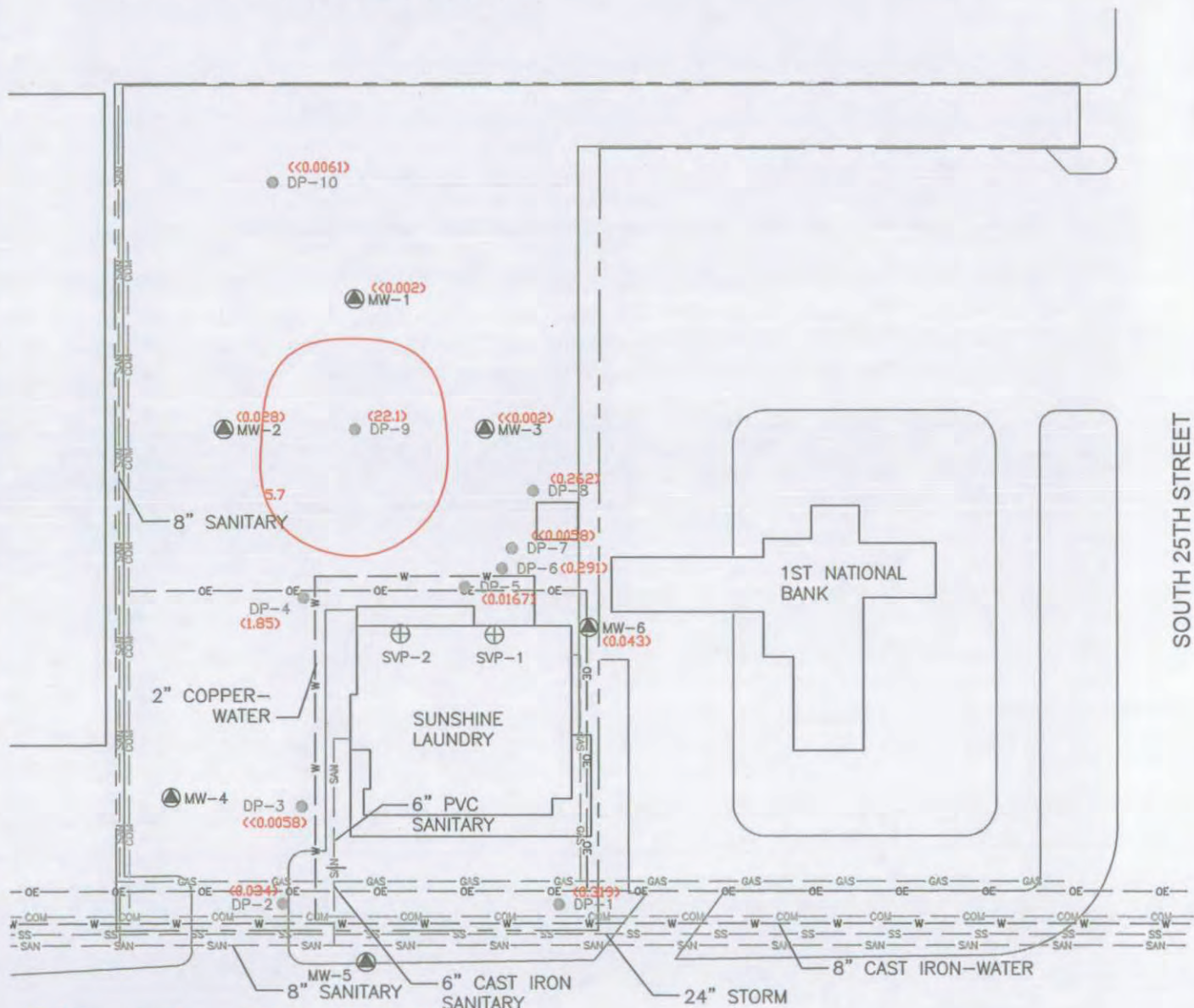
APPROXIMATE LOCATION OF SOIL GAS
WELL - INSTALLED MARCH 2008

— GAS — NATURAL GAS LINE
— COM — COMMUNICATIONS CABLE
- - - - - PROPERTY BOUNDARY
— OE — OVERHEAD ELECTRIC LINE

— W — WATER SUPPLY
— SAN — SANITARY SEWER
— SS — STORM SEWER

SCALE

0 50 FT.



Soil Plume Contours: PCE/TETRACHLOROETHYLENE
V-2.51,

22.1 (mg/kg) greater than maximum interpolated value.

5TH AVE SOUTH/HIGHWAY 20

SOIL - PCE/TETRACHLOROETHYLENE
SUNSHINE LAUNDRY
FORT DODGE, IOWA
PROJECT NO. SNSHN 09000
DRAWING DATE: JUNE 2010

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FIGURE

3A

SCALE

0 50 FT.

 MW-1

APPROXIMATE LOCATION MONITORING
WELL LOCATION - BARKER LEMAR

● BH-1

APPROXIMATE LOCATION OF BOREHOLE
- INSTALLED MARCH 2008

⊕ SG-1

APPROXIMATE LOCATION OF SOIL GAS
WELL - INSTALLED MARCH 2008

— GAS — NATURAL GAS LINE

COMMUNICATIONS CABLE

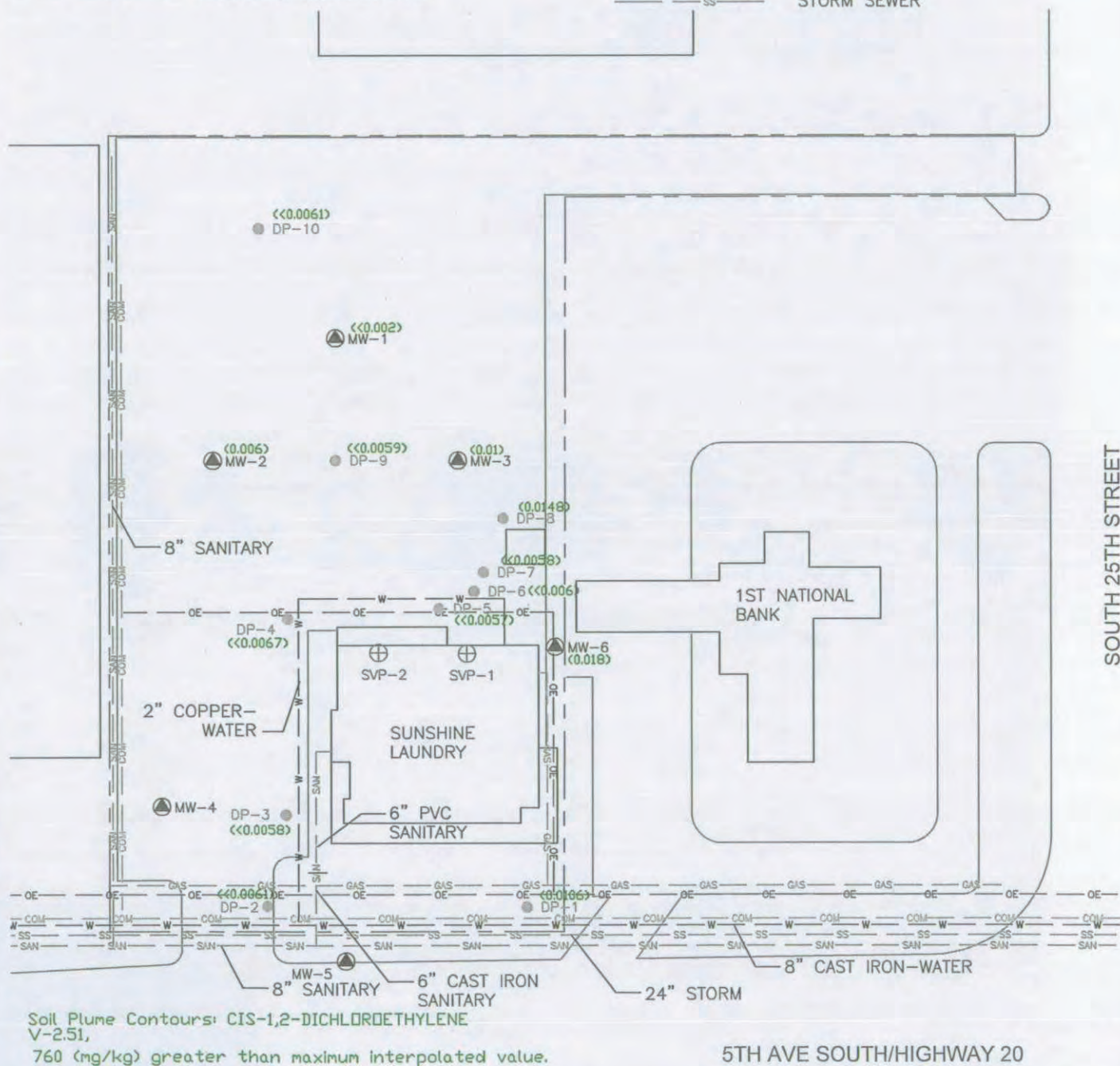
— — — — — PROPERTY BOUNDARY

————— ———— OE ————— OVERHEAD ELECTRIC LINE

— W — WATER SUPPLY

————— SAN ————— SANITARY SEWER

— — \$ — — STORM SEWER



SOIL - CIS-1,2-DICHLOROETHYLENE
SUNSHINE LAUNDRY
FORT DODGE, IOWA
PROJECT NO. SNSHN 09000
DRAWING DATE: JUNE 2010

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FIGURE

3B



LEGEND



APPROXIMATE MONITORING WELL
LOCATION - BARKER LEMAR



APPROXIMATE LOCATION OF
BOREHOLE - INSTALLED MARCH 2008



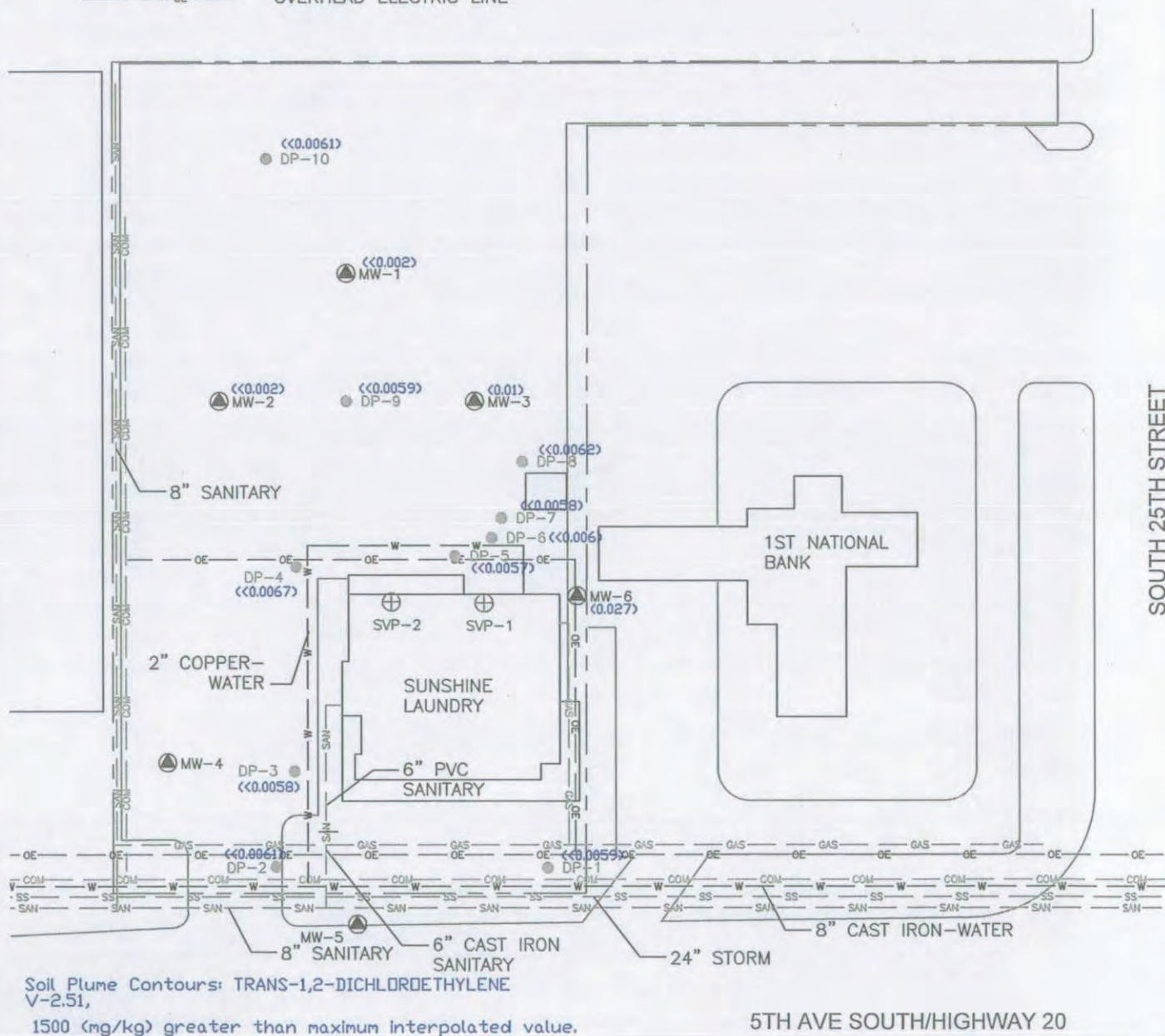
APPROXIMATE LOCATION OF SOIL GAS
WELL - INSTALLED MARCH 2008

SCALE



— GAS — NATURAL GAS LINE
— COM — COMMUNICATIONS CABLE
- - - - - PROPERTY BOUNDARY
— OE — OVERHEAD ELECTRIC LINE

— W — WATER SUPPLY
— SAN — SANITARY SEWER
— SS — STORM SEWER



Soil Plume Contours: TRANS-1,2-DICHLOROETHYLENE
V-2.51,
1500 (mg/kg) greater than maximum interpolated value.

5TH AVE SOUTH/HIGHWAY 20

SOIL - TRANS-1,2-DICHLOROETHYLENE
SUNSHINE LAUNDRY
FORT DODGE, IOWA
PROJECT NO. SNSHN 09000
DRAWING DATE: JUNE 2010

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FIGURE

3C



LEGEND

MW-1

APPROXIMATE MONITORING WELL
LOCATION - BARKER LEMAR

BH-1

APPROXIMATE LOCATION OF
BOREHOLE - INSTALLED MARCH 2008

SG-1

APPROXIMATE LOCATION OF SOIL GAS
WELL - INSTALLED MARCH 2008

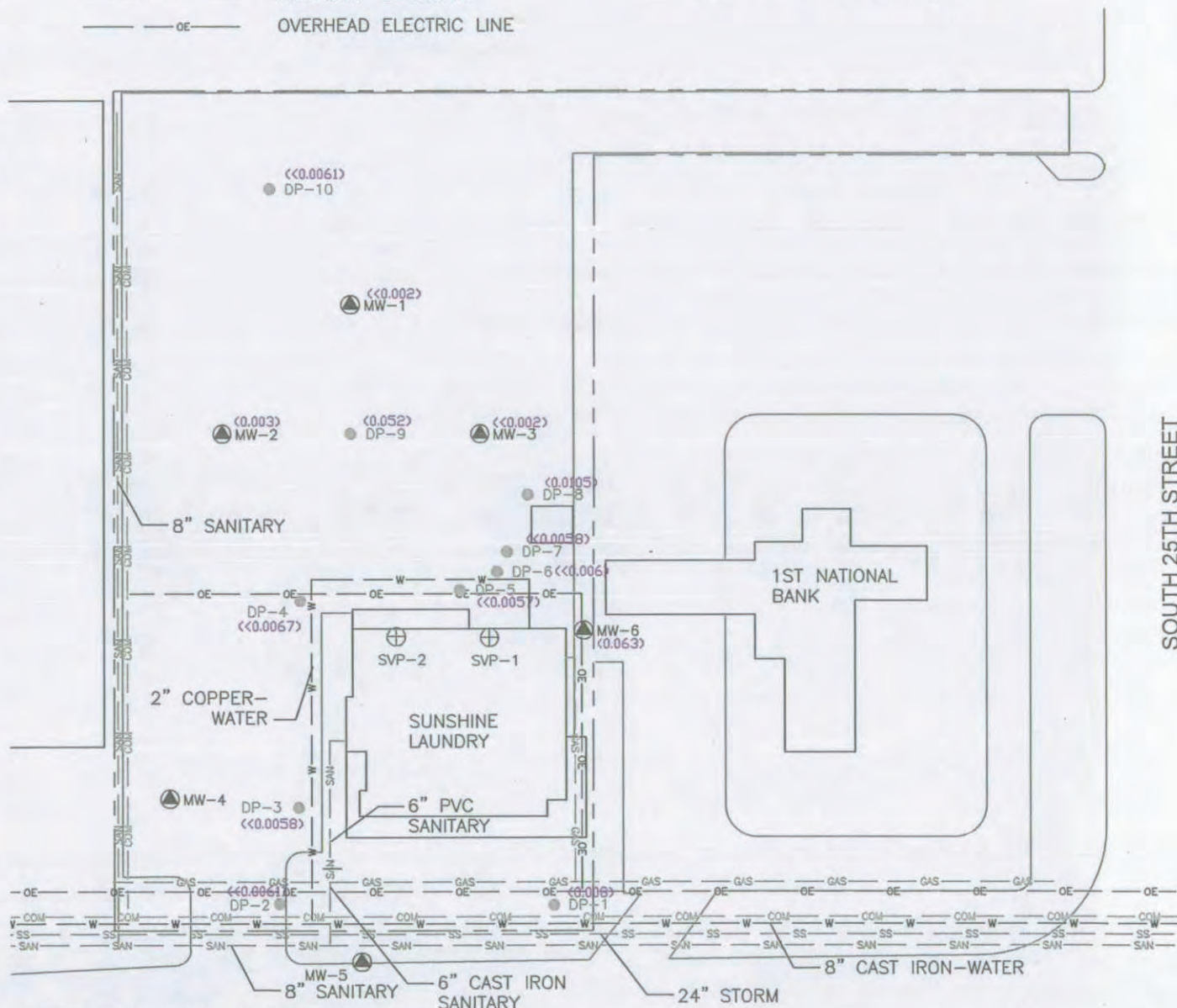
SCALE

0 50 FT.



— GAS — NATURAL GAS LINE
— COM — COMMUNICATIONS CABLE
- - - PROPERTY BOUNDARY
— OE — OVERHEAD ELECTRIC LINE

— W — WATER SUPPLY
— SAN — SANITARY SEWER
— SS — STORM SEWER



Soil Plume Contours: TCE/TRICHLOROETHYLENE
V-2.51,
7.7 (mg/kg) greater than maximum interpolated value.

5TH AVE SOUTH/HIGHWAY 20

SOIL - TCE-TRICHLOROETHYLENE
SUNSHINE LAUNDRY
FORT DODGE, IOWA
PROJECT NO. SNSHN 09000
DRAWING DATE: JUNE 2010

BARKER LEMAR
ENGINEERING CONSULTANTS

1801 Industrial Circle - West Des Moines, Iowa - 50265
Phone: 515.256.8814 - Fax: 515.256.0152 - www.barkerleamar.com

FIGURE

3D



LEGEND



MW-1

APPROXIMATE MONITORING WELL
LOCATION - BARKER LEMAR



BH-1

APPROXIMATE LOCATION OF
BOREHOLE - INSTALLED MARCH 2008



SG-1

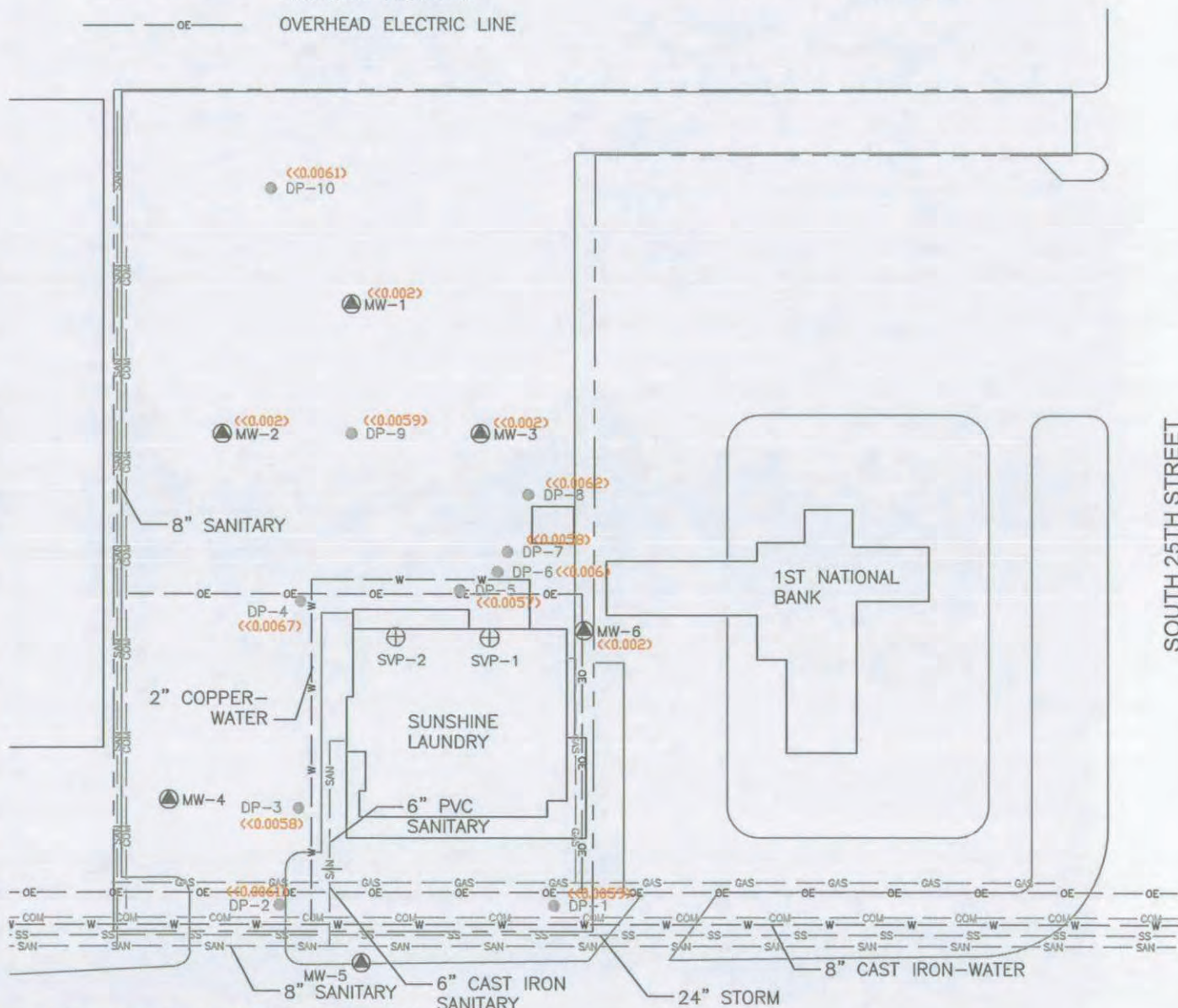
APPROXIMATE LOCATION OF SOIL GAS
WELL - INSTALLED MARCH 2008

SCALE



— GAS — NATURAL GAS LINE
— COM — COMMUNICATIONS CABLE
- - - - - PROPERTY BOUNDARY
— OE — OVERHEAD ELECTRIC LINE

— W — WATER SUPPLY
— SAN — SANITARY SEWER
— SS — STORM SEWER



Soil Plume Contours: VINYL CHLORIDE/VC
V-2.51,
2.1 (ng/kg) greater than maximum interpolated value.

5TH AVE SOUTH/HIGHWAY 20

SOIL - VINYL CHLORIDE-VC
SUNSHINE LAUNDRY
FORT DODGE, IOWA
PROJECT NO. SNSHN 09000
DRAWING DATE: JUNE 2010

BARKER LEMAR

ENGINEERING CONSULTANTS

1801 Industrial Circle - West Des Moines, Iowa - 50265
Phone: 515.256.8814 - Fax: 515.256.0152 - www.barkerleamar.com

FIGURE

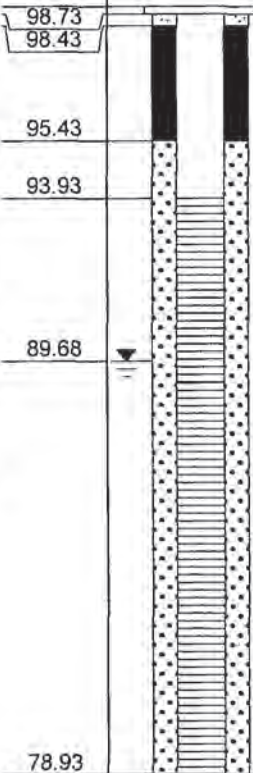
3E

ATTACHMENT A

Boring Logs / Monitoring Well Construction Diagrams

SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: MW-1	Facility Name: Sunshine Laundry Site Assessment	Facility Street Address: 2422 5th Avenue S. Fort Dodge, IA
Boring Depth (ft) X Diameter (in): 20' X 7"		Drilling Method: 3.25" Hollow-stem Auger
Well Contractor Name: Mike Dixon Registration Number: 8438		Logged By: Jerry Barton

Ground Surface Elevation (ASL): 98.93			Top of Casing Elevation (ASL): 98.82					
Date: 1/18/10 Start Time: 2:00 pm		Date: 1/18/10 End Time: 4:15 pm		UST Number		LUST Number		
Depth Feet	Well Construction Details	Blow Count if applicable	Sample No.	Type*	PID/FID Reading	Rock Formations, Soil Color and Classifications, Observations (moisture, odor, etc.) First column for USCS		
0								
					0	CL-	Blacktop, gravel, and	
					0	ML	dark brown silty clay	
2.5					0	FILL	Dark brown/black silty	
					0		clay trace sand and	
					0		gravel, pebbles	
5					0			
					0			
					-		No Return	
7.5					-			
					0	CL	Dark brown/black silty	
				MW-1	VOC	0	CL	clay trace sand and
10						0	CL	gravel, pebbles
						0		Gray and brown sandy
						0		clay with pebbles, rust
12.5						0		mottled with olive bands
						0		Brown sandy clay, with
						0		gray bands and rust
15						0		mottling, small sand
					0	CL	seams with pebbles	
					0		Dark gray silty clay,	
					0		trace sand & gravel.	
17.5					0		Small sand seam at	
					0		19'.6"	
20					0			
							Bottom of Boring at 20 feet	
22.5								
25								
27.5								

* SS (split spoon) HS (hollow stem auger) HA (hand auger)

Observations	Date:	1/18/10	1/28/10		
Water Levels (ASL)	Level:	89.68	93.78		
Static Water Level Symbol	Time:	while drilling			

SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: MW-2		Facility Name: Sunshine Laundry Site Assessment	Facility Street Address: 2422 5th Avenue S. Fort Dodge, IA
Boring Depth (ft) X Diameter (in): 20' X 7"			Drilling Method: Hollow-stem Auger
Well Contractor Name: Mike Dixon Registration Number: 8438			Logged By: Jerry Barton
Ground Surface Elevation (ASL): 99.46		Top of Casing Elevation (ASL): 98.98	
Date: 1/19/10 Start Time: 8:15 am	Date: 1/19/10 End Time: 10:15 am	UST Number	LUST Number

Depth Feet	Well Construction Details	Blow Count if applicable	Sample		PID/FID Reading	Rock Formations, Soil Color and Classifications, Observations (moisture, odor, etc.) First column for USCS
			No.	Type*		
0						
				0	FILL	Asphalt, gravel
				0	CL	Very dark brown silty sandy clay, trace gravel
2.5				0		
				3.4		
				4.5		
5				5.4		No Return
				-		
7.5				-		
				-	CL	Gray silty sandy clay and trace sand and gravel
				1.9	GP	Brown coarse gravel
10				1.4	SC	Clayey sand
				6.0	CL	Dark gray, silty clay and trace sand and gravel, rust mottled from 10'-13'. 10'-13' dry. 13'-15' moist.
12.5				0.3		
				0		
				0		
15				0	CL	Dark gray silty clay and trace sand and gravel (moist)
				0		
17.5				0		
				0		
20			0			
					Bottom of Boring at 20 feet	
22.5						
25						
27.5						

* SS (split spoon) HS (hollow stem auger) HA (hand auger)

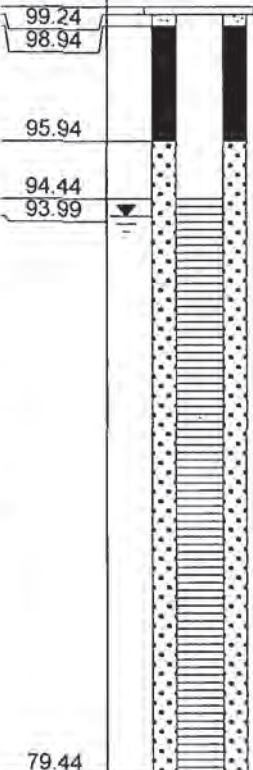
Observations	Date:	1/28/10			
Water Levels (ASL)	Level:	93.56			
Static Water Level Symbol	Time:				

SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: MW-3	Facility Name: Sunshine Laundry Site Assessment	Facility Street Address: 2422 5th Avenue S. Fort Dodge, IA
Boring Depth (ft) X Diameter (in): 20' X 7"		Drilling Method: 3.25" Hollow-stem Auger
Well Contractor Name: Mike Dixon Registration Number: 8438		Logged By: Jerry Barton

Ground Surface Elevation (ASL): 99.44	Top of Casing Elevation (ASL): 99.00
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Date: 1/19/10 Start Time: 10:35 am	Date: 1/19/10 End Time: 1:00 pm	UST Number	LUST Number
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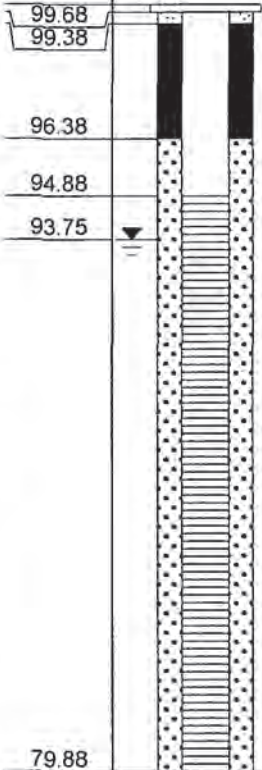
Depth Feet	Well Construction Details	Blow Count if applicable	Sample		PID/FID Reading	Rock Formations, Soil Color and Classifications, Observations (moisture, odor, etc.) First column for USCS	
			No.	Type*			
0					0	FILL	Ice, blacktop, gravel,
					0	CL	Very dark brown sandy clay and trace gravel
2.5					7.5		
			MW-3	VOC	17.8		
					17.4		
5					7.9	CL	Gray and tan silty clay, rust mottled, sand seam at 8'6"
					5.7		
					5.4		
					4.8		
					3.7		
10					2.7	CL	Grayish brown silty clay, rust mottled
					1.6		
					0.8	CL	Gray silty clay, trace sand and gravel
					0		
					0.6		
15					0.6	CL	Gray silty clay, trace sand and gravel. Sand seam at 19'6"
					0		
					0		
					0		
20					0		
							Bottom of Boring at 20 feet
22.5							
25							
27.5							

* SS (split spoon) HS (hollow stem auger) HA (hand auger)

Observations	Date:	1/28/10			
Water Levels (ASL)	Level:	93.99			
Static Water Level Symbol	Time:				

SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: MW-4	Facility Name: Sunshine Laundry Site Assessment	Facility Street Address: 2422 5th Avenue S. Fort Dodge, IA
Boring Depth (ft) X Diameter (in): 20' X 7"		Drilling Method: 3.25" Hollow-stem Auger
Well Contractor Name: Mike Dixon Registration Number: 8438		Logged By: Jerry Barton

Ground Surface Elevation (ASL): 99.88			Top of Casing Elevation (ASL): 99.72					
Date: 1/19/10 Start Time:		Date: 1/19/10 End Time:		UST Number		LUST Number		
Depth Feet	Well Construction Details	Blow Count if applicable	Sample No. Type*		PID/FID Reading	Rock Formations, Soil Color and Classifications, Observations (moisture, odor, etc.) First column for USCS		
0								
						FILL	Ice, blacktop and gravel	
2.5						CL	Very dark brown silty clay, trace sand and gravel	
						CL	Light gray silty clay	
5								
7.5						CL	Brown silty clay	
10								
12.5								
15								
17.5								
20								
							Bottom of Boring at 20 feet	
22.5								
25								
27.5								

* SS (split spoon) HS (hollow stem auger) HA (hand auger)

Observations	Date:	1/28/10			
Water Levels (ASL)	Level:	93.75			
Static Water Level Symbol	Time:				

SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: MW-5	Facility Name: Sunshine Laundry Site Assessment	Facility Street Address: 2422 5th Avenue S. Fort Dodge, IA
Boring Depth (ft) X Diameter (in): 10' X 3"		Drilling Method: 3" Continuous Flight Auger
Well Contractor Name: Mike Dixon Registration Number: 8438		Logged By: Jerry Barton

Ground Surface Elevation (ASL): 99.94	Top of Casing Elevation (ASL): 99.72
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Date: 4/23/10 Start Time: 12 pm	Date: 4/23/10 End Time: 2 pm	UST Number	LUST Number
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Depth Feet	Well Construction Details	Blow Count if applicable	Sample No.	Type*	PID/FID Reading	Rock Formations, Soil Color and Classifications, Observations (moisture, odor, etc.) First column for USCS
0	<p>The diagram shows a well casing starting at 99.74 and 99.44, with a fill layer at 97.94. Below the casing, there is a layer of dark brown silty clay (CL) from 3' to 1' bgs, and a layer of light brown silty clay (CL) below that. The bottom of the boring is at 10 feet.</p>					
-2.5						
-5						
-7.5						
-10						Bottom of Boring at 10 feet
-12.5						
-15						
-17.5						
-20						
-22.5						
-25						
-27.5						

* SS (split spoon) HS (hollow stem auger) HA (hand auger)

Observations	Date:	4/22/10			
Water Levels (ASL)	Level:	94.54			
Static Water Level Symbol	Time:				

SOIL BORING LOG & MONITORING WELL CONSTRUCTION DIAGRAM

Boring / Well Number: MW-6	Facility Name: Sunshine Laundry Site Assessment	Facility Street Address: 2422 5th Avenue S. Fort Dodge, IA
Boring Depth (ft) X Diameter (in): 14' X 3"		Drilling Method: 3" Hand Auger
Well Contractor Name: Mike Dixon Registration Number: 8438		Logged By: Jerry Barton

Ground Surface Elevation (ASL): 101.16	Top of Casing Elevation (ASL): 101.04
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Date: 4/23/10 Start Time: 10:30 am	Date: 4/23/10 End Time: 12:00 pm	UST Number	LUST Number
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Depth Feet	Well Construction Details	Blow Count if applicable	Sample		PID/FID Reading	Rock Formations, Soil Color and Classifications, Observations (moisture, odor, etc.) First column for USCS		
			No.	Type*				
0					0	FILL	Grass, topsoil	
					0.6	CL	Dark brown silty clay trace sand at 2'	
-2.5					0.2			
					0			
					0.1	SW	Brown sand (fill)	
-5					0			
					0			
					0			
					0.1			
-10				MW-6	VOC	0.8		
						0.1	CL	Dark Brown Silty Clay
						0		
-12.5						0		
						0		
-15							Bottom of Boring at 14 feet	
-17.5								
-20								
-22.5								
-25								
-27.5								

* SS (split spoon) HS (hollow stem auger) HA (hand auger)

Observations	Date:	4/22/10			
Water Levels (ASL)	Level:	94.73			
Static Water Level Symbol	Time:				

ATTACHMENT B

Laboratory Analytical Reports

04 February 2010

Sid Juwarker
Barker-Lemar Associates
1801 Industrial Circle
West Des Moines, IA 50265

RE: SJ Project
Sunshine Laundry

Enclosed are the results of analyses for samples received by the laboratory on 01/20/10 12:00. If you have any questions concerning this report, please feel free to contact me at 1-800-858-5227.

ANALYTICAL REPORT FOR SAMPLES

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1 9'	10A0817-01	Soil	01/18/10 15:20	01/20/10 12:00
MW-2 11'	10A0817-02	Soil	01/19/10 09:30	01/20/10 12:00
MW-3 3'	10A0817-03	Soil	01/19/10 11:15	01/20/10 12:00

*The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record.
This analytical report must be reproduced in its entirety.*

Page 1 of 12

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: Sunshine Laundry
Project Manager: Sid Juwarker

Reported
02/04/10 14:20

MW-1 9'
10A0817-01 (Soil)

Date Sampled: 1/18/2010 3:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Volatile Organic Compounds

cis-1,2-Dichloroethylene	ND	0.002	mg/kg dry	1	1B00229	02/01/10	02/01/10	EPA 8260B	
Tetrachloroethylene	ND	0.002	"	"	"	"	"	"	
Trichloroethylene	ND	0.002	"	"	"	"	"	"	
trans-1,2-Dichloroethylene	ND	0.002	"	"	"	"	"	"	
Vinyl Chloride	ND	0.002	"	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	97.8 %	73-132	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	99.8 %	82-122	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane	106 %	75-132	"	"	"	"	"	"	
Surrogate: Toluene-d8	104 %	85-115	"	"	"	"	"	"	

Determination of Conventional Chemistry Parameters

% Solids	8480	0.1	%	1	1A02107	01/21/10	01/21/10	SM 2540 G	
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Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: Sunshine Laundry
Project Manager: Sid Juwarker

Reported
02/04/10 14:20

MW-2 11'

10A0817-02 (Soil)

Date Sampled: 1/19/2010 9:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Volatile Organic Compounds

cis-1,2-Dichloroethylene	0.006	0.002	mg/kg dry	1	1B00229	02/01/10	02/01/10	EPA 8260B	
Tetrachloroethylene	0.028	0.002	"	"	"	"	"	"	
Trichloroethylene	0.003	0.002	"	"	"	"	"	"	
trans-1,2-Dichloroethylene	ND	0.002	"	"	"	"	"	"	
Vinyl Chloride	ND	0.002	"	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	106 %	73-132	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	95.8 %	82-122	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane	107 %	75-132	"	"	"	"	"	"	
Surrogate: Toluene-d8	105 %	85-115	"	"	"	"	"	"	

Determination of Conventional Chemistry Parameters

% Solids	84.0	0.1	%	1	1A02107	01/21/10	01/21/10	SM 2540 G	
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The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record.
This analytical report must be reproduced in its entirety.

Page 3 of 12

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: Sunshine Laundry
Project Manager: Sid Juwarker

Reported
02/04/10 14:20

MW-3 3'
10A0817-03 (Soil)

Date Sampled: 1/19/2010 11:15:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Volatile Organic Compounds

cis-1,2-Dichloroethylene	0.01	0.002	mg/kg dry	1	1B00229	02/01/10	02/02/10	EPA 8260B	
Tetrachloroethylene	ND	0.002	"	"	"	"	"	"	
Trichloroethylene	ND	0.002	"	"	"	"	"	"	
trans-1,2-Dichloroethylene	0.01	0.002	"	"	"	"	"	"	
Vinyl Chloride	ND	0.002	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		105 %	73-132		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	82-122		"	"	"	"	
Surrogate: Dibromofluoromethane		107 %	75-132		"	"	"	"	
Surrogate: Toluene-d8		104 %	85-115		"	"	"	"	

Determination of Conventional Chemistry Parameters

% Solids	80.7	0.1	%	1	1A02107	01/21/10	01/21/10	SM 2540 G	
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Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: Sunshine Laundry
Project Manager: Sid Juwarker

Reported
02/04/10 14:20

Determination of Volatile Organic Compounds - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 10B0310 - 1B00229

Calibration Check (10B0310-CCV1)

Prepared & Analyzed: 02/01/10

Vinyl Chloride	98.33		mg/kg wet	100.450		97.9	80-120			
Methyl-t-butyl Ether (MTBE)	112.0		mg/kg	113.050		99.0	80-120			
trans-1,2-Dichloroethylene	50.34		mg/kg wet	50.0000		101	80-120			
cis-1,2-Dichloroethylene	49.83		"	50.0000		99.7	80-120			
Benzene	48.60		mg/kg	50.0000		97.2	80-120			
1,2-Dichloroethane	48.01		"	50.0000		96.0	80-120			
Trichloroethylene	49.54		mg/kg wet	50.0000		99.1	80-120			
Toluene	49.05		mg/kg	50.0000		98.1	80-120			
Tetrachloroethylene	48.69		mg/kg wet	50.0000		97.4	80-120			
Ethylbenzene	49.55		mg/kg	50.0000		99.1	80-120			
1,2-Dibromoethane	50.29		"	50.0000		101	80-120			
Xylenes, total	154.2		"	150.000		103	80-120			

Surrogate: Dibromofluoromethane	49.9		"	50.0000		99.7	80-120			
Surrogate: 1,2-Dichloroethane-d4	48.7		"	50.0000		97.5	80-120			
Surrogate: Dibromofluoromethane	49.9		"	50.0000		99.7	80-120			
Surrogate: Toluene-d8	49.4		"	50.0000		98.8	80-120			
Surrogate: 1,2-Dichloroethane-d4	48.7		"	50.0000		97.5	80-120			
Surrogate: 4-Bromofluorobenzene	49.8		"	50.0000		99.7	80-120			
Surrogate: Toluene-d8	49.4		"	50.0000		98.8	80-120			
Surrogate: 4-Bromofluorobenzene	49.8		"	50.0000		99.7	80-120			

Calibration Check (10B0310-CCV2)

Prepared: 02/01/10 Analyzed: 02/03/10

Vinyl Chloride	100.4		mg/kg wet	100.450		99.9	80-120			
trans-1,2-Dichloroethylene	63.69		"	50.0000		127	80-120			C-11
Methyl-t-butyl Ether (MTBE)	120.4		mg/kg	113.050		106	80-120			
cis-1,2-Dichloroethylene	51.22		mg/kg wet	50.0000		102	80-120			
Benzene	54.20		mg/kg	50.0000		108	80-120			
1,2-Dichloroethane	50.76		"	50.0000		102	80-120			
Trichloroethylene	54.68		mg/kg wet	50.0000		109	80-120			
Toluene	53.99		mg/kg	50.0000		108	80-120			
Tetrachloroethylene	56.41		mg/kg wet	50.0000		113	80-120			
Ethylbenzene	54.32		mg/kg	50.0000		109	80-120			
1,2-Dibromoethane	54.57		"	50.0000		109	80-120			
Xylenes, total	166.0		"	150.000		111	80-120			

Surrogate: Dibromofluoromethane	47.9		"	50.0000		95.8	80-120			
Surrogate: Dibromofluoromethane	53.6		"	50.0000		107	80-120			
Surrogate: 1,2-Dichloroethane-d4	45.3		"	50.0000		90.6	80-120			
Surrogate: Toluene-d8	47.8		"	50.0000		95.5	80-120			
Surrogate: 1,2-Dichloroethane-d4	45.3		"	50.0000		90.6	80-120			
Surrogate: Toluene-d8	47.8		"	50.0000		95.5	80-120			
Surrogate: 4-Bromofluorobenzene	47.7		"	50.0000		95.4	80-120			

The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record.
This analytical report must be reproduced in its entirety.

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: Sunshine Laundry
Project Manager: Sid Juwarker

Reported
02/04/10 14:20

Determination of Volatile Organic Compounds - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 10B0310 - 1B00229

Calibration Check (10B0310-CCV2)

Prepared: 02/01/10 Analyzed: 02/03/10

Surrogate: 4-Bromofluorobenzene	47.7	mg/kg	50.0000	95.4	80-120
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Batch 1B00229 - EPA 5030B

Blank (1B00229-BLK1)

Prepared & Analyzed: 02/01/10

Vinyl Chloride	ND	0.001	mg/kg wet		
trans-1,2-Dichloroethylene	ND	0.001	"		
cis-1,2-Dichloroethylene	ND	0.001	"		
Trichloroethylene	ND	0.001	"		
Tetrachloroethylene	ND	0.001	"		
Surrogate: Dibromofluoromethane	0.0498	mg/kg	0.0500000	99.5	75-132
Surrogate: 1,2-Dichloroethane-d4	0.0448	"	0.0500000	89.6	73-132
Surrogate: Toluene-d8	0.0520	"	0.0500000	104	85-115
Surrogate: 4-Bromofluorobenzene	0.0486	"	0.0500000	97.1	82-122

LCS (1B00229-BS1)

Prepared: 02/01/10 Analyzed: 02/03/10

Vinyl Chloride	0.0992	0.001	mg/kg wet	0.100450	98.7	86-139
trans-1,2-Dichloroethylene	0.05	0.001	"	0.0500000	110	77-124
cis-1,2-Dichloroethylene	0.05	0.001	"	0.0500000	96.2	80-120
Trichloroethylene	0.0521	0.001	"	0.0500000	104	87-119
Tetrachloroethylene	0.0532	0.001	"	0.0500000	106	79-120
Surrogate: Dibromofluoromethane	0.0483	mg/kg	0.0500000	96.5	75-132	
Surrogate: 1,2-Dichloroethane-d4	0.0449	"	0.0500000	89.7	73-132	
Surrogate: Toluene-d8	0.0485	"	0.0500000	97.0	85-115	
Surrogate: 4-Bromofluorobenzene	0.0483	"	0.0500000	96.6	82-122	

Matrix Spike (1B00229-MS1)

Source: 10A0817-01

Prepared: 02/01/10 Analyzed: 02/03/10

Vinyl Chloride	0.0045	0.004	mg/kg dry	0.00459125	ND	98.0	59-150
Methyl-t-butyl Ether (MTBE)	0.3532	0.008	mg/kg	0.360853	ND	97.9	59-146
trans-1,2-Dichloroethylene	0.002	0.004	mg/kg dry	0.00228536	ND	100	64-133
cis-1,2-Dichloroethylene	0.002	0.004	"	0.00228536	ND	93.0	66-131
Benzene	0.1859	0.004	mg/kg	0.193798	ND	95.9	55-148
1,2-Dichloroethane	0.1716	0.004	"	0.193798	ND	88.5	56-146
Trichloroethylene	0.0023	0.004	mg/kg dry	0.00228536	ND	101	67-133
Toluene	0.1791	0.004	mg/kg	0.193798	ND	92.4	66-140
Tetrachloroethylene	0.0021	0.004	mg/kg dry	0.00228536	ND	89.8	65-127
Ethylbenzene	0.1755	0.004	mg/kg	0.193798	ND	90.6	55-150
1,2-Dibromoethane	0.1777	0.004	"	0.193798	ND	91.7	59-137
Xylenes, total	0.5235	0.008	"	0.581395	ND	90.0	57-150
Surrogate: Dibromofluoromethane	0.185	"	0.193798	95.3	75-132		
Surrogate: Dibromofluoromethane	0.185	"	0.193798	95.3	75-132		

The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record.
This analytical report must be reproduced in its entirety.

Page 6 of 12

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: Sunshine Laundry
Project Manager: Sid Juwarker

Reported
02/04/10 14:20

Determination of Volatile Organic Compounds - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1B00229 - EPA 5030B

Matrix Spike (1B00229-MS1)

Source: 10A0817-01

Prepared: 02/01/10 Analyzed: 02/03/10

Surrogate: 1,2-Dichloroethane-d4	0.178		mg/kg	0.193798		91.8	73-132			
Surrogate: Toluene-d8	0.189		"	0.193798		97.8	85-115			
Surrogate: 1,2-Dichloroethane-d4	0.178		"	0.193798		91.8	73-132			
Surrogate: 4-Bromofluorobenzene	0.189		"	0.193798		97.7	82-122			
Surrogate: Toluene-d8	0.189		"	0.193798		97.8	85-115			
Surrogate: 4-Bromofluorobenzene	0.189		"	0.193798		97.7	82-122			

Matrix Spike Dup (1B00229-MSD1)

Source: 10A0817-01

Prepared: 02/01/10 Analyzed: 02/03/10

Vinyl Chloride	0.0039	0.003	mg/kg dry	3.00379664	ND	102	59-150	15.1	30	
Methyl-t-butyl Ether (MTBE)	0.3054	0.006	mg/kg	0.298397	ND	102	59-146	14.5	20	
trans-1,2-Dichloroethylene	0.002	0.003	mg/kg dry	3.00188982	ND	95.1	64-133	24.0	29	
cis-1,2-Dichloroethylene	0.002	0.003	"	3.00188982	ND	96.2	66-131	15.7	21	
Benzene	0.1506	0.003	mg/kg	0.160256	ND	94.0	55-148	20.9	23	
1,2-Dichloroethane	0.1503	0.003	"	0.160256	ND	93.8	56-146	13.2	19	
Trichloroethylene	0.0018	0.003	mg/kg dry	3.00188982	ND	97.0	67-133	23.0	23	
Toluene	0.1466	0.003	mg/kg	0.160256	ND	91.5	66-140	20.0	25	
Tetrachloroethylene	0.0017	0.003	mg/kg dry	3.00188982	ND	88.5	65-127	20.3	29	
Ethylbenzene	0.1451	0.003	mg/kg	0.160256	ND	90.6	55-150	19.0	27	
1,2-Dibromoethane	0.1481	0.003	"	0.160256	ND	92.4	59-137	18.2	26	
Xylenes, total	0.4444	0.006	"	0.480769	ND	92.4	57-150	16.3	28	
Surrogate: Dibromofluoromethane	0.160		"	0.160256		99.9	75-132			
Surrogate: Dibromofluoromethane	0.160		"	0.160256		99.9	75-132			
Surrogate: 1,2-Dichloroethane-d4	0.158		"	0.160256		98.9	73-132			
Surrogate: 1,2-Dichloroethane-d4	0.158		"	0.160256		98.9	73-132			
Surrogate: Toluene-d8	0.158		"	0.160256		98.7	85-115			
Surrogate: 4-Bromofluorobenzene	0.162		"	0.160256		101	82-122			
Surrogate: Toluene-d8	0.158		"	0.160256		98.7	85-115			
Surrogate: 4-Bromofluorobenzene	0.162		"	0.160256		101	82-122			

The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record.
This analytical report must be reproduced in its entirety.

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Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: Sunshine Laundry
Project Manager: Sid Juwarker

Reported
02/04/10 14:20

Determination of Conventional Chemistry Parameters - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1A02107 - Wet Chem Preparation

Duplicate (1A02107-DUP1) Source: 10A0772-01 Prepared & Analyzed: 01/21/10

% Solids	2.1	0.1	%		2.1			2.84	20	
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Duplicate (1A02107-DUP2) Source: 10A0807-01 Prepared & Analyzed: 01/21/10

% Solids	18.3	0.1	%		18.2			0.494	20	
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Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: Sunshine Laundry
Project Manager: Sid Juwarker

Reported
02/04/10 14:20

Certified Analyses Included in This Report

Method/Matrix	Analyte	Certifications
EPA 8260B in Soil	Chloromethane	IA-NT,KS-NT,NELAC
	Vinyl Chloride	IA-NT,KS-NT,NELAC
	Vinyl Chloride	IA-NT,KS-NT,NELAC
	Bromomethane	IA-NT,KS-NT,NELAC
	Chloroethane	IA-NT,KS-NT,NELAC
	1,1-Dichloroethylene	IA-NT,KS-NT,NELAC
	Acetone	IA-NT,KS-NT,NELAC
	Carbon Disulfide	IA-NT,KS-NT,NELAC
	Methylene Chloride	IA-NT,KS-NT,NELAC
	Methyl-t-butyl Ether (MTBE)	IA-NT,KS-NT,NELAC
	trans-1,2-Dichloroethylene	IA-NT,KS-NT,NELAC
	trans-1,2-Dichloroethylene	IA-NT,KS-NT,NELAC
	Methyl-t-butyl Ether (MTBE)	IA-NT,KS-NT,NELAC
	1,1-Dichloroethane	IA-NT,KS-NT,NELAC
	cis-1,2-Dichloroethylene	IA-NT
	cis-1,2-Dichloroethylene	IA-NT
	2-Butanone (MEK)	IA-NT,KS-NT,NELAC
	Chloroform	IA-NT,KS-NT,NELAC
	1,1,1-Trichloroethane	IA-NT,KS-NT,NELAC
	Carbon Tetrachloride	IA-NT,KS-NT,NELAC
	Benzene	IA-NT,KS-NT,NELAC
	1,2-Dichloroethane	IA-NT,KS-NT,NELAC
	Benzene	IA-NT,KS-NT,NELAC
	1,2-Dichloroethane	IA-NT,KS-NT,NELAC
	Trichloroethylene	IA-NT,KS-NT,NELAC
	Trichloroethylene	IA-NT,KS-NT,NELAC
	1,2-Dichloropropane	IA-NT,KS-NT,NELAC
	Bromodichloromethane	IA-NT,KS-NT,NELAC
	Toluene	IA-NT,KS-NT,NELAC
	cis-1,3-Dichloropropene	IA-NT,KS-NT,NELAC
	4-Methyl-2-pentanone (MIBK)	IA-NT,KS-NT,NELAC
	Toluene	IA-NT,KS-NT,NELAC
	trans-1,3-Dichloropropene	IA-NT,KS-NT,NELAC
	1,1,2-Trichloroethane	IA-NT,KS-NT,NELAC
	Tetrachloroethylene	IA-NT,KS-NT,NELAC
	Tetrachloroethylene	IA-NT,NELAC,KS-NT
	2-Hexanone (MBK)	IA-NT,KS-NT,NELAC
	Dibromochloromethane	IA-NT,KS-NT,NELAC
	1,2-Dibromoethane	IA-NT
	Ethylbenzene	IA-NT,KS-NT,NELAC
	Chlorobenzene	IA-NT,KS-NT,NELAC
	Xylenes, total	IA-NT,KS-NT,NELAC
	Ethylbenzene	IA-NT,KS-NT,NELAC
	Xylenes, total	IA-NT,KS-NT,NELAC

The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record.
This analytical report must be reproduced in its entirety.

Page 9 of 12

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: Sunshine Laundry
Project Manager: Sid Juwarker

Reported
02/04/10 14:20

Bromoform	IA-NT,KS-NT,NELAC
1,1,2,2-Tetrachloroethane	IA-NT,KS-NT,NELAC
1,3-Dichlorobenzene	IA-NT,KS-NT,NELAC
1,4-Dichlorobenzene	IA-NT,KS-NT,NELAC
1,2-Dichlorobenzene	IA-NT,KS-NT,NELAC
Naphthalene	KS-NT,NELAC

SM 2540 G in Soil

% Solids	IA-NT
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Code	Certifying Authority	Certificate Number	Expires
IA-NT	Iowa Department of Natural Resources	095	02/01/2010
KS-NT	Kansas Department of Health and Environment	E-10287	07/31/2010
NELAC	New Jersey Department of Environmental Protection	IA001	06/30/2010

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: Sunshine Laundry
Project Manager: Sid Juwarker

Reported
02/04/10 14:20

Notes and Definitions

C-11 The CCV was outside established acceptance limits. Batch was accepted based on acceptable LCS and/or MS/MSD recoveries.

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: Sunshine Laundry
Project Manager: Sid Juwarker

Reported
02/04/10 14:20

Sue Thompson

Sue Thompson
Project Manager I

Keystone

LABORATORIES, INC.

☒ 600 E. 17th St. S.
Newton, IA 50208
Phone: 641-792-8451
Fax: 641-792-7989

☐ 3012 Ansbrough Ave.
Waterloo, IA 50701
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☐ 1155 Adams, Suite 120
Kansas City, KS 66103
Phone: 913-321-7856
Fax: 913-321-7937

PAGE 1 OF 1

PRINT OR TYPE INFORMATION BELOW

SAMPLER: DIXON / BACTON
SITE NAME: SUNSHINE LAUNDRY
ADDRESS: _____
CITY/ST/ZIP: Fort Dodge, IA
PHONE: _____

REPORT TO:

NAME: Sid ~~Frank~~ Jzwanker
COMPANY NAME: BARKER LEMAR
ADDRESS: 1801 Industrial Circle
CITY/ST/ZIP: W. Des Moines, IA
PHONE: _____
FAX: _____

BILL TO:

NAME: _____
COMPANY NAME: BARKER LEMAR
ADDRESS: _____
CITY/ST/ZIP: _____
PHONE: _____
Keystone Quote No.: _____
(If Applicable)

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	ANALYSES REQUIRED										LAB USE ONLY	
							EPA Method 8260										LABORATORY WORK ORDER NO. <u>1040817</u>	LABORATORY SAMPLE NUMBER
MW-1	1/18/10	3:30	MW-1 9'	1	SOIL													01
MW-2	1/19/10	9:30	MW-2 11'	1	SOIL													02
MW-3	1/19/10	11:15	MW-3 3'	1	SOIL													03
MW-3A	1/19/10	11:30	MW-3A 7'	1	SOIL													04
(Please call Sid Jzwanker to see if he wants MW-3A tested.)																		

Relinquished by: (Signature) <u>M. Dixon</u>	Date <u>1/19/10</u> Time <u>10:10 PM</u>	Received by: (Signature) <u>Fridge</u>	Date <u>1/19/10</u> Time <u>10:10 PM</u>	Turn-Around: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush	Contact Lab Prior to Submission
Relinquished by: (Signature)	Date Time	Received for Lab by: (Signature) <u>Beje</u>	Date <u>1/20/10</u> Time <u>12:00 PM</u>	Remarks: <u>Analyses: EPA METHOD 8260 FOR: PCE, TCE, DCE, vinyl chloride</u>	

15 February 2010

Sid Juwarker
Barker-Lemar Associates
1801 Industrial Circle
West Des Moines, IA 50265

RE: SJ Project
SNSHN 09000

Enclosed are the results of analyses for samples received by the laboratory on 01/29/10 15:00. If you have any questions concerning this report, please feel free to contact me at 1-800-858-5227.

ANALYTICAL REPORT FOR SAMPLES

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-3	10A1236-01	Water	01/29/10 07:00	01/29/10 15:00
MW-1	10A1236-02	Water	01/29/10 07:30	01/29/10 15:00
MW-2	10A1236-03	Water	01/29/10 07:45	01/29/10 15:00
MW-4	10A1236-04	Water	01/29/10 08:30	01/29/10 15:00

*The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record.
This analytical report must be reproduced in its entirety.*

Page 1 of 11

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
02/15/10 09:55

MW-3

10A1236-01 (Water)

Date Sampled: 1/29/2010 7:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Volatile Organic Compounds

Vinyl Chloride	6.2	1.0	ug/l	1	1B01113	02/10/10	02/10/10	EPA 8260B	
Surrogate: Dibromofluoromethane		104 %	70-132		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		108 %	79-126		"	"	"	"	
Surrogate: Toluene-d8		102 %	85-118		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %	85-121		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record.
This analytical report must be reproduced in its entirety.

Page 2 of 11

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
02/15/10 09:55

MW-3

10A1236-01RE1 (Water)

Date Sampled: 1/29/2010 7:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Volatile Organic Compounds

cis-1,2-Dichloroethylene	1110	25.0	ug/l	25	1B01113	02/10/10	02/11/10	EPA 8260B	
Tetrachloroethylene	1970	25.0	"	"	"	"	"	"	
Trichloroethylene	281	25.0	"	"	"	"	"	"	
trans-1,2-Dichloroethylene	518	25.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		107 %	70-132		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		104 %	79-126		"	"	"	"	
Surrogate: Toluene-d8		104 %	85-118		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	85-121		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record.
This analytical report must be reproduced in its entirety.

Page 3 of 11

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
02/15/10 09:55

MW-1
10A1236-02 (Water)

Date Sampled: 1/29/2010 7:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Volatile Organic Compounds

cis-1,2-Dichloroethylene	20.1	1.0	ug/l	1	1B01113	02/10/10	02/11/10	EPA 8260B	
Tetrachloroethylene	2.8	1.0	"	"	"	"	"	"	
Trichloroethylene	6.0	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethylene	3.7	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane	107 %	70-132	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	103 %	79-126	"	"	"	"	"	"	
Surrogate: Toluene-d8	103 %	85-118	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	99.8 %	85-121	"	"	"	"	"	"	

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
02/15/10 09:55

MW-2

10A1236-03 (Water)

Date Sampled: 1/29/2010 7:45:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Volatile Organic Compounds

cis-1,2-Dichloroethylene	46.8	1.0	ug/l	1	1B01113	02/10/10	02/11/10	EPA 8260B	
Tetrachloroethylene	57.8	1.0	"	"	"	"	"	"	
Trichloroethylene	10.8	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethylene	13.7	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane	108 %	70-132	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	104 %	79-126	"	"	"	"	"	"	
Surrogate: Toluene-d8	102 %	85-118	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	105 %	85-121	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record.
This analytical report must be reproduced in its entirety.

Page 5 of 11

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
02/15/10 09:55

MW-4
10A1236-04 (Water)

Date Sampled: 1/29/2010 8:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Volatile Organic Compounds

cis-1,2-Dichloroethylene	2.9	1.0	ug/l	1	1B01113	02/10/10	02/11/10	EPA 8260B	
Tetrachloroethylene	7.3	1.0	"	"	"	"	"	"	
Trichloroethylene	1.1	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethylene	1.4	1.0	"	"	"	"	"	"	
Vinyl Chloride	ND	1.0	"	"	"	"	"	"	

Surrogate: Dibromofluoromethane	108 %	70-132	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4	104 %	79-126	"	"	"	"	"	"	
Surrogate: Toluene-d8	102 %	85-118	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	101 %	85-121	"	"	"	"	"	"	

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
02/15/10 09:55

Determination of Volatile Organic Compounds - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 10B1104 - 1B01113

Calibration Check (10B1104-CCV1)

Prepared & Analyzed: 02/10/10

Vinyl Chloride	106.8		ug/l	100.450		106	80-120			
trans-1,2-Dichloroethylene	51.75		"	50.0000		104	80-120			
cis-1,2-Dichloroethylene	52.84		"	50.0000		106	80-120			
Trichloroethylene	50.62		"	50.0000		101	80-120			
Tetrachloroethylene	51.00		"	50.0000		102	80-120			
Surrogate: Dibromofluoromethane	51.1		"	50.0000		102	80-120			
Surrogate: 1,2-Dichloroethane-d4	51.2		"	50.0000		102	80-120			
Surrogate: Toluene-d8	50.1		"	50.0000		100	80-120			
Surrogate: 4-Bromofluorobenzene	50.4		"	50.0000		101	80-120			

Calibration Check (10B1104-CCV2)

Prepared: 02/10/10 Analyzed: 02/11/10

Vinyl Chloride	99.33		ug/l	100.450		98.9	80-120			
trans-1,2-Dichloroethylene	50.29		"	50.0000		101	80-120			
cis-1,2-Dichloroethylene	49.07		"	50.0000		98.1	80-120			
Trichloroethylene	49.54		"	50.0000		99.1	80-120			
Tetrachloroethylene	47.44		"	50.0000		94.9	80-120			
Surrogate: Dibromofluoromethane	51.4		"	50.0000		103	80-120			
Surrogate: 1,2-Dichloroethane-d4	51.1		"	50.0000		102	80-120			
Surrogate: Toluene-d8	50.0		"	50.0000		100	80-120			
Surrogate: 4-Bromofluorobenzene	52.2		"	50.0000		104	80-120			

Batch 1B01113 - EPA 5030B

Blank (1B01113-BLK1)

Prepared & Analyzed: 02/10/10

Vinyl Chloride	ND	1.0	ug/l							
trans-1,2-Dichloroethylene	ND	1.0	"							
cis-1,2-Dichloroethylene	ND	1.0	"							
Trichloroethylene	ND	1.0	"							
Tetrachloroethylene	ND	1.0	"							
Surrogate: Dibromofluoromethane	53.8		"	50.0000		108	70-132			
Surrogate: 1,2-Dichloroethane-d4	51.8		"	50.0000		104	79-126			
Surrogate: Toluene-d8	50.3		"	50.0000		101	85-118			
Surrogate: 4-Bromofluorobenzene	50.9		"	50.0000		102	85-121			

The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record.
This analytical report must be reproduced in its entirety.

Page 7 of 11

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
02/15/10 09:55

Determination of Volatile Organic Compounds - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1B01113 - EPA 5030B										
LCS (1B01113-BS1)				Prepared & Analyzed: 02/10/10						
Vinyl Chloride	112.6	1.0	ug/l	96.9500		116	69-140			
cis-1,2-Dichloroethylene	55.34	1.0	"	50.0000		111	82-123			
Trichloroethylene	55.31	1.0	"	50.0000		111	81-130			
Tetrachloroethylene	54.61	1.0	"	50.0000		109	75-130			
Surrogate: Dibromofluoromethane	50.4		"	50.0000		101	70-132			
Surrogate: 1,2-Dichloroethane-d4	50.6		"	50.0000		101	79-126			
Surrogate: Toluene-d8	49.5		"	50.0000		99.1	85-118			
Surrogate: 4-Bromofluorobenzene	50.4		"	50.0000		101	85-121			
Matrix Spike (1B01113-MS1)				Source: 10B0365-04		Prepared & Analyzed: 02/10/10				
Vinyl Chloride	1154	10.0	ug/l	969.500	ND	119	71-140			
cis-1,2-Dichloroethylene	566.7	10.0	"	500.000	ND	113	77-124			
Trichloroethylene	565.4	10.0	"	500.000	ND	113	79-125			
Tetrachloroethylene	560.4	10.0	"	500.000	ND	112	72-128			
Surrogate: Dibromofluoromethane	51.3		"	50.0000		103	70-132			
Surrogate: 1,2-Dichloroethane-d4	51.7		"	50.0000		103	79-126			
Surrogate: Toluene-d8	49.7		"	50.0000		99.4	85-118			
Surrogate: 4-Bromofluorobenzene	51.8		"	50.0000		104	85-121			
Matrix Spike Dup (1B01113-MSD1)				Source: 10B0365-04		Prepared & Analyzed: 02/10/10				
Vinyl Chloride	1063	10.0	ug/l	969.500	ND	110	71-140	8.18	15	
cis-1,2-Dichloroethylene	538.6	10.0	"	500.000	ND	108	77-124	5.08	15	
Trichloroethylene	520.0	10.0	"	500.000	ND	104	79-125	8.37	16	
Tetrachloroethylene	511.9	10.0	"	500.000	ND	102	72-128	9.05	14	
Surrogate: Dibromofluoromethane	52.2		"	50.0000		104	70-132			
Surrogate: 1,2-Dichloroethane-d4	51.7		"	50.0000		103	79-126			
Surrogate: Toluene-d8	50.2		"	50.0000		100	85-118			
Surrogate: 4-Bromofluorobenzene	52.1		"	50.0000		104	85-121			

The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record
This analytical report must be reproduced in its entirety.

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Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
02/15/10 09:55

Certified Analyses Included in This Report

Method/Matrix	Analyte	Certifications
EPA 8260B in Water	Vinyl Chloride	IA-NT,KS-NT,NELAC
	trans-1,2-Dichloroethylene	IA-NT,KS-NT,NELAC
	cis-1,2-Dichloroethylene	SIA1X
	Benzene	IA-NT,KS-NT,NELAC
	Trichloroethylene	IA-NT,KS-NT,NELAC
	Tetrachloroethylene	IA-NT,NELAC,KS-NT

Code	Certifying Authority	Certificate Number	Expires
KS-NT	Kansas Department of Health and Environment	E-10287	07/31/2010
NELAC	New Jersey Department of Environmental Protection	IA001	06/30/2010
SIA1X	Iowa Department of Natural Resources	095	02/01/2010

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Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
02/15/10 09:55

Notes and Definitions

- R-03 The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
02/15/10 09:55

Sue Thompson

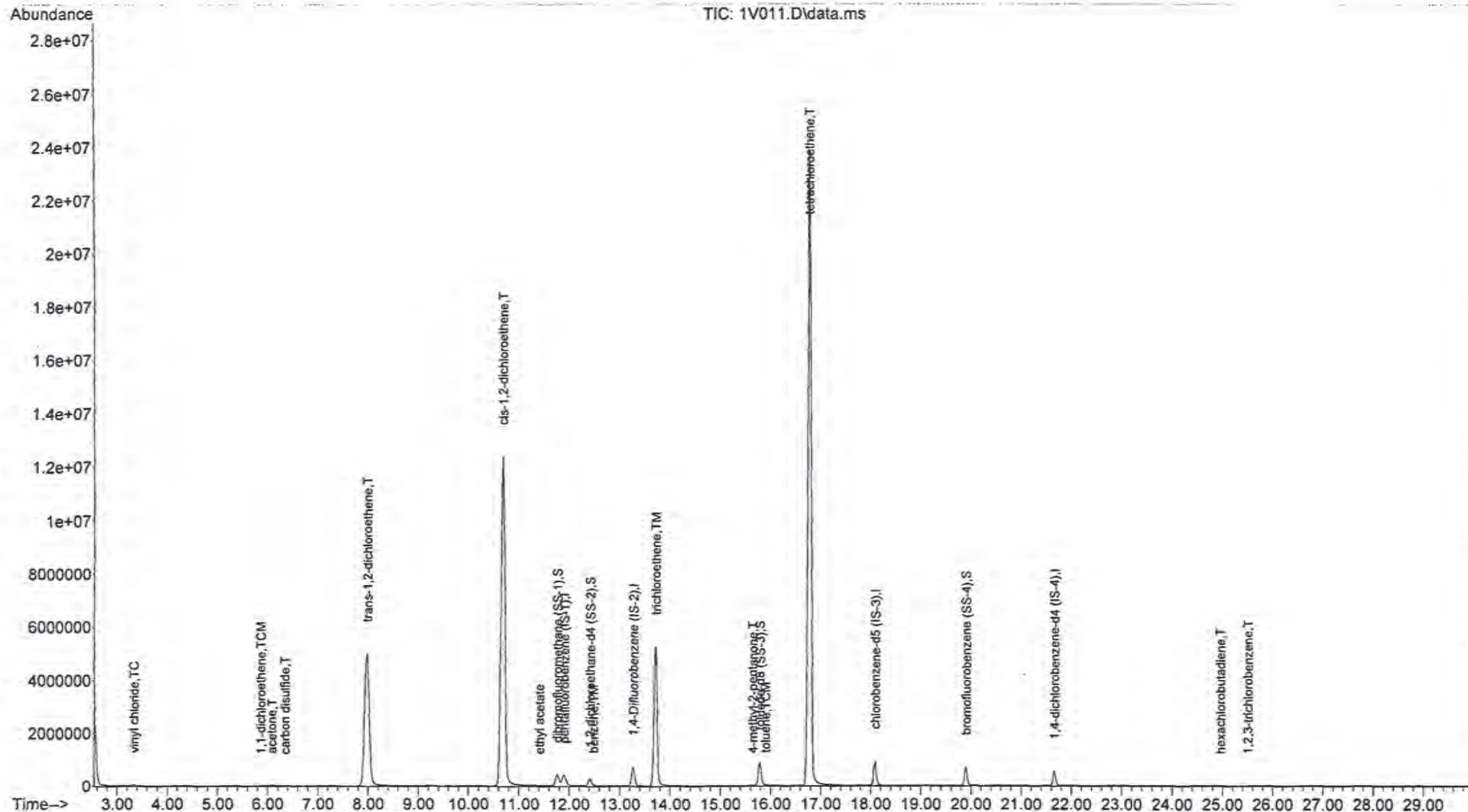
Sue Thompson
Project Manager I

Data File : g:\mschem\1\data\021010a1\1V011.D
Acq On : 10 Feb 2010 11:27 pm
Sample : 10A1236-01
Misc : f,
Quant Time: Feb 11 08:30:05 2010

Vial: 11
Operator: TVK
Inst : MS #1
Multiplr: 1.00

Keystone Laboratories
600 E. 17th Street S.
Newton, IA 50208

Quant Method : G:\MSCHEM\1\METHODS\SP020810.M
Quant Title : 5 mL WATER
QLast Update : Tue Feb 09 13:51:24 2010
Response via : Initial Calibration
DataAcq Meth:VOC_H2O1

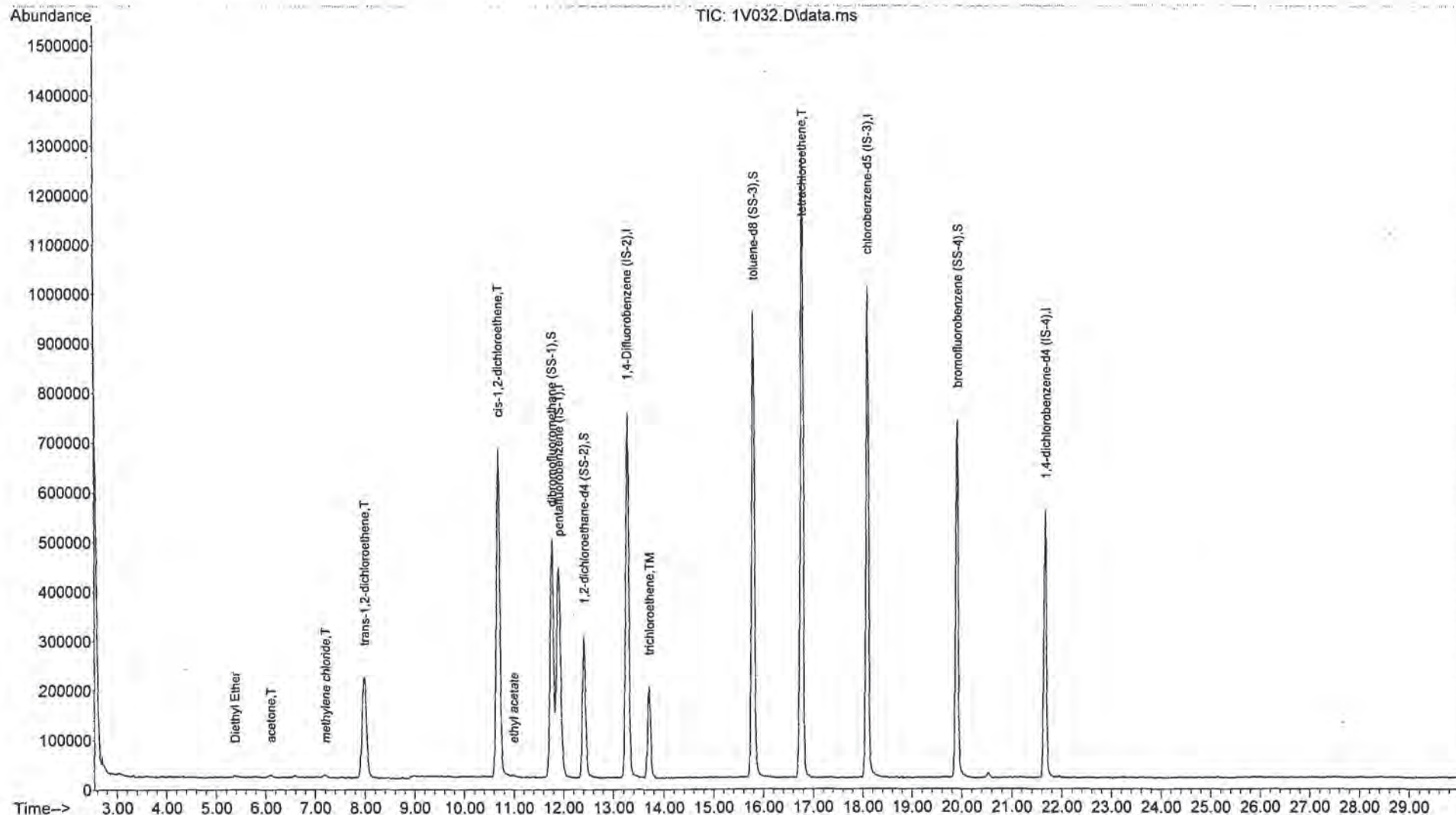


Data File : G:\MSCHEM\1\DATA\021010A1\1V032.D
Acq On : 11 Feb 2010 12:44 pm
Sample : 10A1236-01RE1
Misc : 25X
Quant Time: Feb 11 13:48:00 2010

Vial: 32
Operator: TVK
Inst : MS #1
Multiplr: 1.00

Key: 10A1236-01RE1
600 E. 17th Street S.
Newton, IA 50208

Quant Method : G:\MSCHEM\1\METHODS\SP020810.M
Quant Title : 5 mL WATER
QLast Update : Tue Feb 09 13:51:24 2010
Response via : Initial Calibration
DataAcq Meth:VOC_H2O1

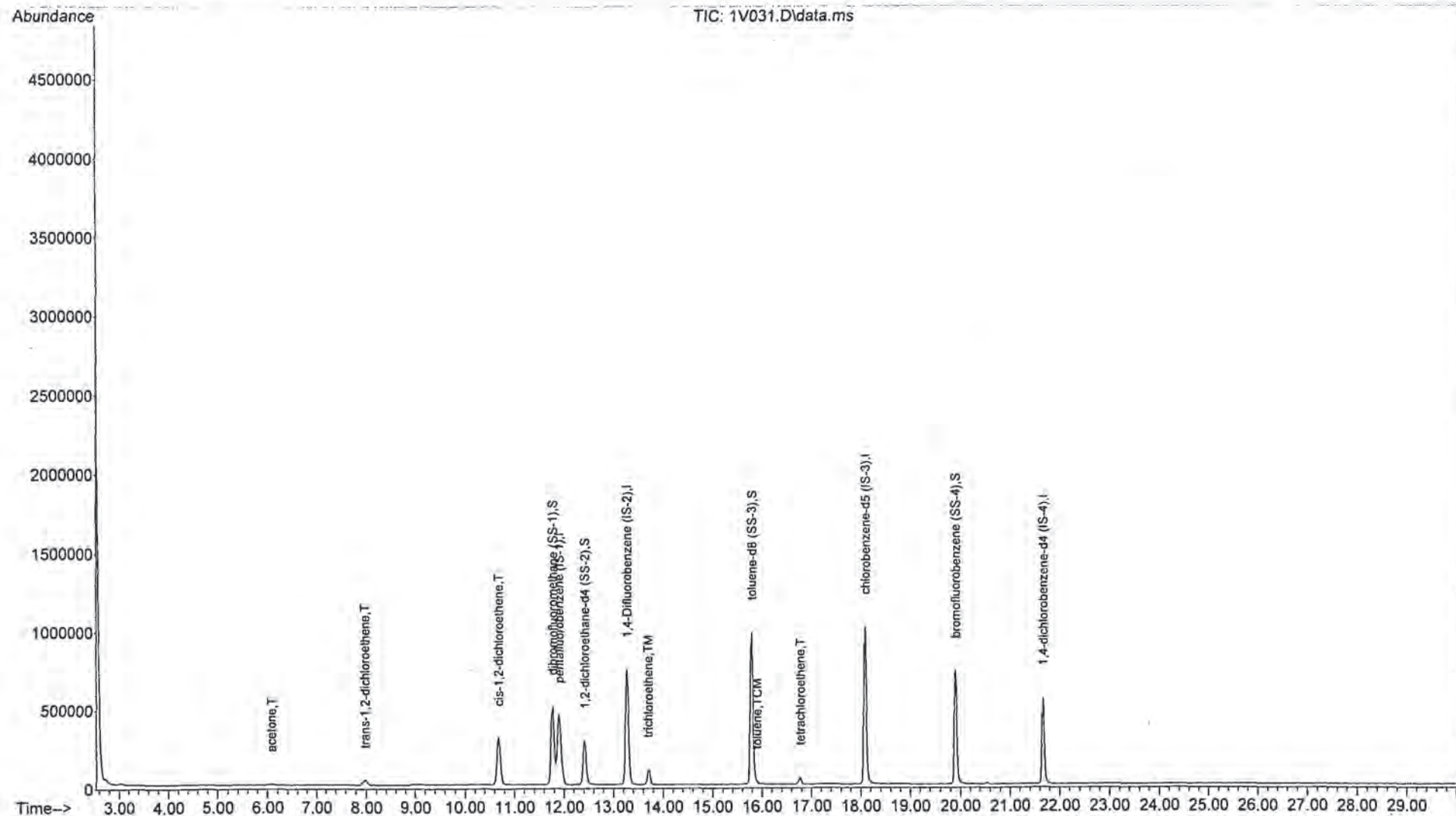


Data File : g:\mschem\1\data\021010a1\1V031.D
Acq On : 11 Feb 2010 12:07 pm
Sample : 10A1236-02
Misc : f,
Quant Time: Feb 11 13:30:56 2010

Vial: 31
Operator: TVK
Inst : MS #1
Multiplr: 1.00

Keystone Laboratories
600 E. 17th Street S.
Newton, IA 50208

Quant Method : G:\MSCHEM\1\METHODS\SP020810.M
Quant Title : 5 mL WATER
QLast Update : Tue Feb 09 13:51:24 2010
Response via : Initial Calibration
DataAcq Meth:VOC_H2O1

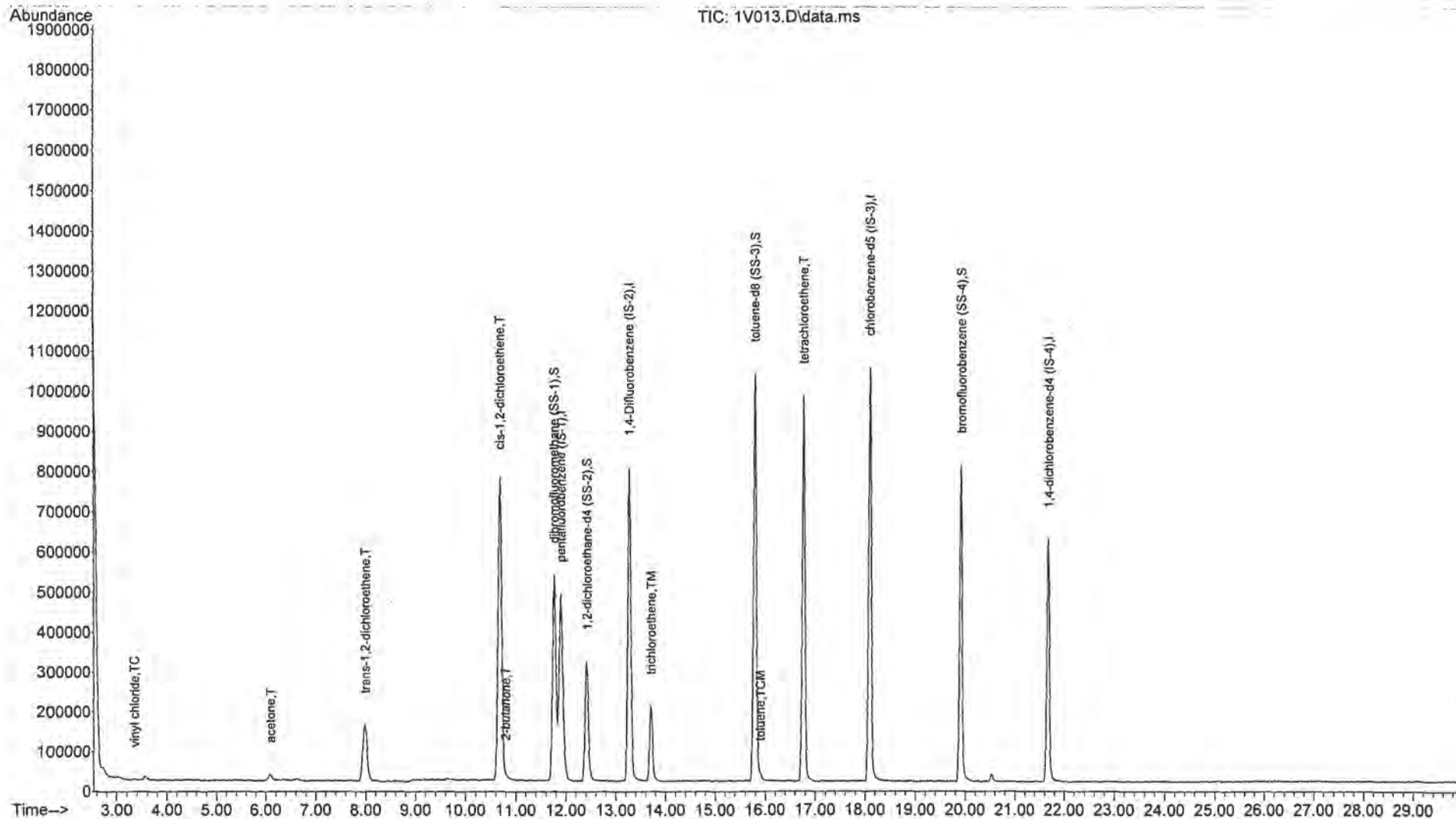


Data File : g:\mschem\1\data\021010a1\1V013.D
Acq On : 11 Feb 2010 12:43 am
Sample : 10A1236-03
Misc : f
Quant Time: Feb 11 08:33:58 2010

Vial: 13
Operator: TVK
Inst : MS #1
Multiplr: 1.00

Keystone Laboratories
600 E. 17th Street S.
Newton, IA 50208

Quant Method : G:\MSCHEM\1\METHODS\SP020810.M
Quant Title : 5 mL WATER
QLast Update : Tue Feb 09 13:51:24 2010
Response via : Initial Calibration
DataAcq Meth:VOC_H2O1

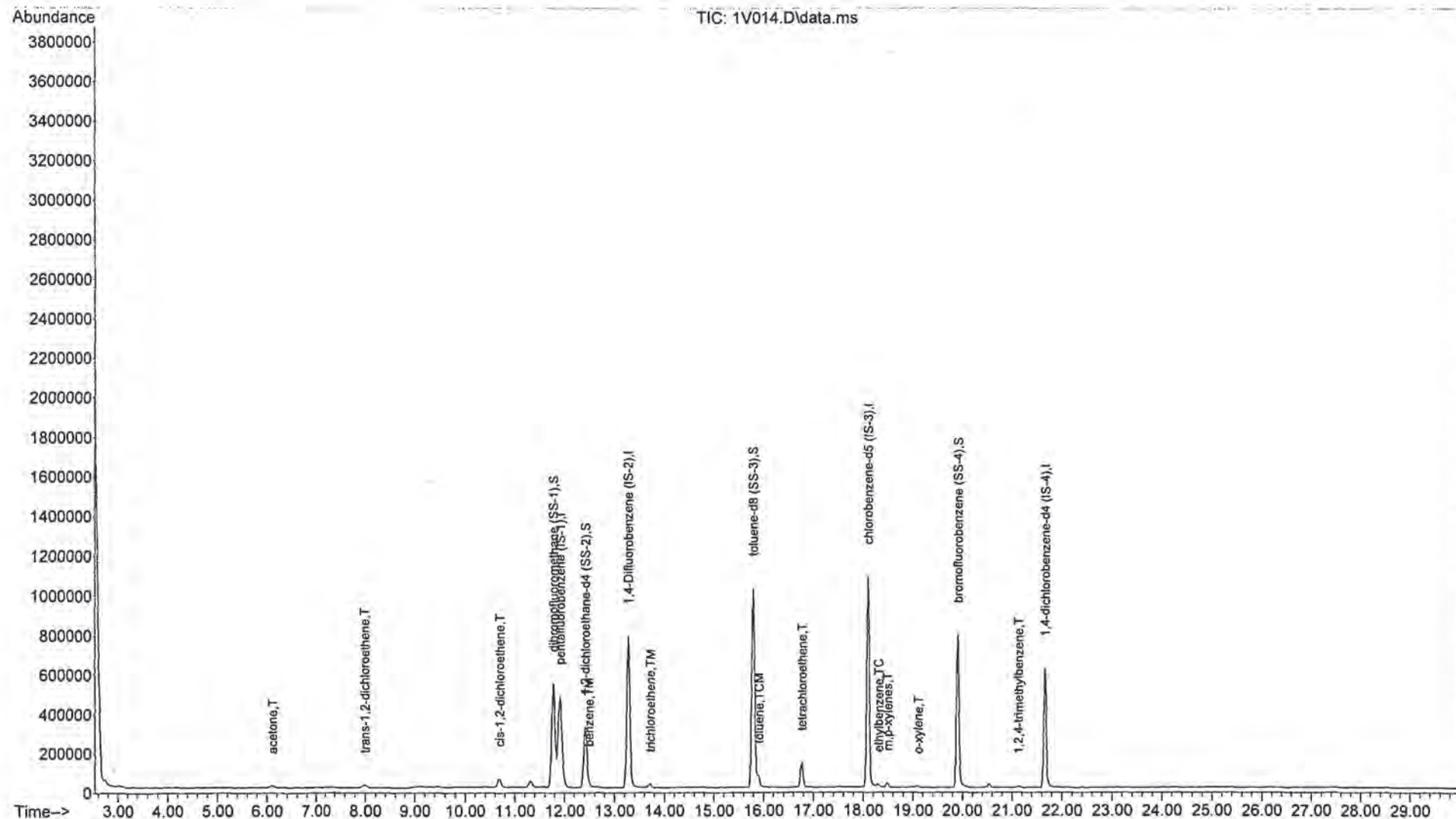


Data File : g:\mschem\1\data\021010a1\1V014.D
Acq On : 11 Feb 2010 1:22 am
Sample : 10A1236-04
Misc : f
Quant Time: Feb 11 08:44:08 2010

Vial: 14
Operator: TVK
Inst : MS #1
Multiplr: 1.00

Keystone Laboratories
600 E. 17th Street S.
Newton, IA 50208

Quant Method : G:\MSCHEM\1\METHODS\SP020810.M
Quant Title : 5 mL WATER
QLast Update : Tue Feb 09 13:51:24 2010
Response via : Initial Calibration
DataAcq Meth:VOC_H2O1



Keystone

LABORATORIES, INC.

☒ 600 E. 17th St. S.
Newton, IA 50208
Phone: 641-792-8451
Fax: 641-792-7989

☐ 3012 Ansbrough Ave.
Waterloo, IA 50701
Phone: 319-235-4440
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www.keystonelabs.com

☐ 1155 Adams, Suite 120
Kansas City, KS 66103
Phone: 913-321-7856
Fax: 913-321-7937

PAGE 1 OF 1

PRINT OR TYPE INFORMATION BELOW

SAMPLER: Kris Sommer
SITE NAME: SNSHN 09000
ADDRESS: 2422 5th Ave. S.
CITY/ST/ZIP: Fort Dodge, IA
PHONE: _____

REPORT TO:

NAME: Sid Swartz
COMPANY NAME: Barker Leamy
ADDRESS: 1801 Ind. Ctr.
CITY/ST/ZIP: WDSM, IA
PHONE: 515-251-4814
FAX: _____

BILL TO:

NAME: Same
COMPANY NAME: _____
ADDRESS: _____
CITY/ST/ZIP: _____
PHONE: _____

Keystone Quote No.: _____
(If Applicable)

CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	ANALYSES REQUIRED										LAB USE ONLY	
							Vinyl Chloride	DCE, TCE, PCE	EPA 8260								LABORATORY WORK ORDER NO.	LABORATORY SAMPLE NUMBER
MW-3	1/29	7:00	MW-3	3	H ₂ O		L	L									10A1236	01
MW-1	1/29	7:30	MW-1	3	H ₂ O		L	L										02
MW-2	1/29	7:45	MW-2	3	H ₂ O		L	L										03
MW-4	1/29	8:30	MW-4	3	H ₂ O		L	L										04

Relinquished by: (Signature) <u>K Sommer</u>	Date <u>1/29/10</u> Time <u>7:00</u>	Received by: (Signature) <u>Fridy</u>	Date <u>1/29/10</u> Time <u>3:00</u>	Turn-Around: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush	Contact Lab Prior to Submission
Relinquished by: (Signature)	Date Time	Received for Lab by: (Signature) <u>O'Donnell</u>	Date <u>1/29/10</u> Time <u>3:00</u>	Remarks: <u>H₂O samples need to be analyzed for DCE, TCE, PCE, Vinyl Chloride EPA 8260</u>	

Original - Return with Report

Yellow - Lab Copy

Pink - Sampler Copy

FORM: CCR 7-97

04 May 2010

Sid Juwarker
Barker-Lemar Associates
1801 Industrial Circle
West Des Moines, IA 50265

RE: SJ Project
SNSHN 09000

Enclosed are the results of analyses for samples received by the laboratory on 04/23/10 12:55. If you have any questions concerning this report, please feel free to contact me at 1-800-858-5227.

ANALYTICAL REPORT FOR SAMPLES

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-6	10D1371-01	Soil	04/22/10 00:00	04/23/10 12:55
MW-5	10D1371-02	Water	04/22/10 00:00	04/23/10 12:55
MW-6	10D1371-03	Water	04/22/10 00:00	04/23/10 12:55

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
05/04/10 16:29

MW-6
10D1371-01 (Soil)

Date Sampled: 4/22/2010 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Volatile Organic Compounds

Vinyl Chloride	ND	0.002	mg/kg dry	1	1D02820	04/29/10	04/30/10	EPA 8260B	
1,1-Dichloroethylene	ND	0.002	"	"	"	"	"	"	
trans-1,2-Dichloroethylene	0.027	0.002	"	"	"	"	"	"	
cis-1,2-Dichloroethylene	0.018	0.002	"	"	"	"	"	"	
Trichloroethylene	0.063	0.002	"	"	"	"	"	"	
Tetrachloroethylene	0.043	0.002	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		93.8 %	84-122		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		87.2 %	74-123		"	"	"	"	
Surrogate: Toluene-d8		95.8 %	84-116		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	84-116		"	"	"	"	

Determination of Conventional Chemistry Parameters

% Solids	81.3	0.1	%	1	1D02924	04/29/10	04/29/10	SM 2540 G	
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Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
05/04/10 16:29

MW-5

10D1371-02 (Water)

Date Sampled: 4/22/2010 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Volatile Organic Compounds

Vinyl Chloride	ND	2.0	ug/l	2	1E00323	05/03/10	05/04/10	EPA 8260B	R-06
1,1-Dichloroethylene	ND	2.0	"	"	"	"	"	"	R-06
trans-1,2-Dichloroethylene	ND	2.0	"	"	"	"	"	"	R-06
cis-1,2-Dichloroethylene	ND	2.0	"	"	"	"	"	"	R-06
Trichloroethylene	4.5	2.0	"	"	"	"	"	"	R-06
Tetrachloroethylene	111	2.0	"	"	"	"	"	"	R-06
Surrogate: Dibromofluoromethane		106 %		73-138	"	"	"	"	R-06
Surrogate: 1,2-Dichloroethane-d4		99.3 %		70-128	"	"	"	"	R-06
Surrogate: Toluene-d8		106 %		87-114	"	"	"	"	R-06
Surrogate: 4-Bromofluorobenzene		98.4 %		83-117	"	"	"	"	R-06

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
05/04/10 16:29

MW-6
10D1371-03 (Water)

Date Sampled: 4/22/2010 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Keystone Laboratories, Inc. - Newton

Determination of Volatile Organic Compounds

Vinyl Chloride	ND	2.0	ug/l	2	1E00323	05/03/10	05/04/10	EPA 8260B	R-06
1,1-Dichloroethylene	ND	2.0	"	"	"	"	"	"	R-06
trans-1,2-Dichloroethylene	2.5	2.0	"	"	"	"	"	"	R-06
cis-1,2-Dichloroethylene	3.5	2.0	"	"	"	"	"	"	R-06
Trichloroethylene	5.1	2.0	"	"	"	"	"	"	R-06
Tetrachloroethylene	75.3	2.0	"	"	"	"	"	"	R-06
Surrogate: Dibromofluoromethane		108 %	73-138		"	"	"	"	R-06
Surrogate: 1,2-Dichloroethane-d4		101 %	70-128		"	"	"	"	R-06
Surrogate: Toluene-d8		105 %	87-114		"	"	"	"	R-06
Surrogate: 4-Bromofluorobenzene		101 %	83-117		"	"	"	"	R-06

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
05/04/10 16:29

Determination of Volatile Organic Compounds - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 10D2809 - 1D02820

Calibration Check (10D2809-CCV1)

Prepared: 04/29/10 Analyzed: 04/30/10

Vinyl Chloride	119.9		mg/kg wet	100.450		119	80-120			
1,1-Dichloroethylene	59.36		"	50.0000		119	80-120			
trans-1,2-Dichloroethylene	56.48		"	50.0000		113	80-120			
cis-1,2-Dichloroethylene	55.03		"	50.0000		110	80-120			
Trichloroethylene	51.20		"	50.0000		102	80-120			
Tetrachloroethylene	54.61		"	50.0000		109	80-120			
Surrogate: Dibromofluoromethane	49.9		"	50.0000		99.8	80-120			
Surrogate: 1,2-Dichloroethane-d4	53.8		"	50.0000		108	80-120			
Surrogate: Toluene-d8	50.1		"	50.0000		100	80-120			
Surrogate: 4-Bromofluorobenzene	53.7		"	50.0000		107	80-120			

Batch 10E0306 - 1E00323

Calibration Check (10E0306-CCV1)

Prepared & Analyzed: 05/03/10

Vinyl Chloride	108.3		ug/l	100.450		108	80-120			
1,1-Dichloroethylene	54.47		"	50.0000		109	80-120			
trans-1,2-Dichloroethylene	53.86		"	50.0000		108	80-120			
cis-1,2-Dichloroethylene	53.90		"	50.0000		108	80-120			
Trichloroethylene	52.61		"	50.0000		105	80-120			
Tetrachloroethylene	49.57		"	50.0000		99.1	80-120			
Surrogate: Dibromofluoromethane	52.8		"	50.0000		106	80-120			
Surrogate: 1,2-Dichloroethane-d4	49.9		"	50.0000		99.8	80-120			
Surrogate: Toluene-d8	51.3		"	50.0000		103	80-120			
Surrogate: 4-Bromofluorobenzene	50.8		"	50.0000		102	80-120			

Calibration Check (10E0306-CCV2)

Prepared & Analyzed: 05/03/10

Vinyl Chloride	116.7		ug/l	100.450		116	80-120			
1,1-Dichloroethylene	59.59		"	50.0000		119	80-120			
trans-1,2-Dichloroethylene	58.21		"	50.0000		116	80-120			
cis-1,2-Dichloroethylene	58.65		"	50.0000		117	80-120			
Trichloroethylene	57.68		"	50.0000		115	80-120			
Tetrachloroethylene	54.22		"	50.0000		108	80-120			
Surrogate: Dibromofluoromethane	55.7		"	50.0000		111	80-120			
Surrogate: 1,2-Dichloroethane-d4	47.6		"	50.0000		95.2	80-120			
Surrogate: Toluene-d8	52.2		"	50.0000		104	80-120			
Surrogate: 4-Bromofluorobenzene	50.0		"	50.0000		100	80-120			

The results in this report apply to the samples analyzed in accordance with the Chain-of-Custody record. This analytical report must be reproduced in its entirety.

Page 5 of 14

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
05/04/10 16:29

Determination of Volatile Organic Compounds - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1D02820 - EPA 5030B

Blank (1D02820-BLK1)

Prepared: 04/29/10 Analyzed: 04/30/10

Vinyl Chloride	ND	0.001	mg/kg wet							
1,1-Dichloroethylene	ND	0.001	"							
trans-1,2-Dichloroethylene	ND	0.001	"							
cis-1,2-Dichloroethylene	ND	0.001	"							
Trichloroethylene	ND	0.001	"							
Tetrachloroethylene	ND	0.001	"							
Surrogate: Dibromofluoromethane	0.0451		"	0.0500000		90.2	84-122			
Surrogate: 1,2-Dichloroethane-d4	0.0400		"	0.0500000		80.0	74-123			
Surrogate: Toluene-d8	0.0485		"	0.0500000		96.9	84-116			
Surrogate: 4-Bromofluorobenzene	0.0507		"	0.0500000		101	84-116			

LCS (1D02820-BS1)

Prepared: 04/29/10 Analyzed: 04/30/10

Vinyl Chloride	0.1068	0.001	mg/kg wet	0.0969500		110	81-131			
1,1-Dichloroethylene	0.0559	0.001	"	0.0500000		112	70-144			
trans-1,2-Dichloroethylene	0.0532	0.001	"	0.0500000		106	68-137			
cis-1,2-Dichloroethylene	0.0516	0.001	"	0.0500000		103	67-132			
Trichloroethylene	0.0513	0.001	"	0.0500000		103	87-119			
Tetrachloroethylene	0.0488	0.001	"	0.0500000		97.7	70-128			
Surrogate: Dibromofluoromethane	0.0474		"	0.0500000		94.9	84-122			
Surrogate: 1,2-Dichloroethane-d4	0.0447		"	0.0500000		89.5	74-123			
Surrogate: Toluene-d8	0.0497		"	0.0500000		99.4	84-116			
Surrogate: 4-Bromofluorobenzene	0.0429		"	0.0500000		85.8	84-116			

Matrix Spike (1D02820-MS1)

Source: 10D1055-01

Prepared: 04/29/10 Analyzed: 04/30/10

Vinyl Chloride	0.4722	0.005	mg/kg dry	0.497791	ND	94.9	71-138			
1,1-Dichloroethylene	0.2492	0.005	"	0.256725	ND	97.1	75-150			
trans-1,2-Dichloroethylene	0.2407	0.005	"	0.256725	ND	93.7	72-142			
cis-1,2-Dichloroethylene	0.2315	0.005	"	0.256725	ND	90.2	74-133			
Trichloroethylene	0.2597	0.005	"	0.256725	ND	101	67-133			
Tetrachloroethylene	0.2570	0.005	"	0.256725	ND	100	58-138			
Surrogate: Dibromofluoromethane	0.231		"	0.256725		89.8	84-122			
Surrogate: 1,2-Dichloroethane-d4	0.235		"	0.256725		91.6	74-123			
Surrogate: Toluene-d8	0.247		"	0.256725		96.1	84-116			
Surrogate: 4-Bromofluorobenzene	0.221		"	0.256725		86.2	84-116			

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
05/04/10 16:29

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1D02820 - EPA 5030B

Matrix Spike Dup (1D02820-MSD1) Source: 10D1055-01 Prepared: 04/29/10 Analyzed: 04/30/10

Vinyl Chloride	0.4499	0.004	mg/kg dry	0.472263	ND	95.3	71-138	4.83	28	
1,1-Dichloroethylene	0.2439	0.004	"	0.243560	ND	100	75-150	2.16	25	
trans-1,2-Dichloroethylene	0.2345	0.004	"	0.243560	ND	96.3	72-142	2.59	30	
cis-1,2-Dichloroethylene	0.2285	0.004	"	0.243560	ND	93.8	74-133	1.29	27	
Trichloroethylene	0.2525	0.004	"	0.243560	ND	104	67-133	2.82	23	
Tetrachloroethylene	0.3010	0.004	"	0.243560	ND	124	58-138	15.8	29	
Surrogate: Dibromofluoromethane	0.223		"	0.243560		91.6	84-122			
Surrogate: 1,2-Dichloroethane-d4	0.209		"	0.243560		86.0	74-123			
Surrogate: Toluene-d8	0.236		"	0.243560		97.0	84-116			
Surrogate: 4-Bromofluorobenzene	0.249		"	0.243560		102	84-116			

Batch 1E00323 - EPA 5030B

Blank (1E00323-BLK1)

Prepared & Analyzed: 05/03/10

Vinyl Chloride	ND	1.0	ug/l							
1,1-Dichloroethylene	ND	1.0	"							
trans-1,2-Dichloroethylene	ND	1.0	"							
cis-1,2-Dichloroethylene	ND	1.0	"							
Trichloroethylene	ND	1.0	"							
Tetrachloroethylene	ND	1.0	"							
Surrogate: Dibromofluoromethane	52.7		"	50.0000		105	73-138			
Surrogate: 1,2-Dichloroethane-d4	50.3		"	50.0000		101	70-128			
Surrogate: Toluene-d8	52.8		"	50.0000		106	87-114			
Surrogate: 4-Bromofluorobenzene	49.9		"	50.0000		99.9	83-117			

LCS (1E00323-BS1)

Prepared & Analyzed: 05/03/10

Vinyl Chloride	93.40	1.0	ug/l	96.9500		96.3	74-140			
1,1-Dichloroethylene	50.56	1.0	"	50.0000		101	77-140			
trans-1,2-Dichloroethylene	48.99	1.0	"	50.0000		98.0	74-140			
cis-1,2-Dichloroethylene	48.24	1.0	"	50.0000		96.5	72-134			
Trichloroethylene	47.25	1.0	"	50.0000		94.5	76-127			
Tetrachloroethylene	45.65	1.0	"	50.0000		91.3	77-126			
Surrogate: Dibromofluoromethane	51.0		"	50.0000		102	73-138			
Surrogate: 1,2-Dichloroethane-d4	50.0		"	50.0000		99.9	70-128			
Surrogate: Toluene-d8	52.1		"	50.0000		104	87-114			
Surrogate: 4-Bromofluorobenzene	52.8		"	50.0000		106	83-117			

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

Reported
05/04/10 16:29

Determination of Volatile Organic Compounds - Quality Control
Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1E00323 - EPA 5030B

Matrix Spike (1E00323-MS1)

Source: 10D1188-01

Prepared & Analyzed: 05/03/10

Vinyl Chloride	1117	10.0	ug/l	969.500	ND	115	76-138			
1,1-Dichloroethylene	607.5	10.0	"	500.000	ND	122	75-140			
trans-1,2-Dichloroethylene	595.6	10.0	"	500.000	ND	119	74-140			
cis-1,2-Dichloroethylene	586.0	10.0	"	500.000	ND	117	74-132			
Trichloroethylene	595.7	10.0	"	500.000	ND	119	71-129			
Tetrachloroethylene	564.3	10.0	"	500.000	ND	113	68-128			
Surrogate: Dibromofluoromethane	56.2		"	50.0000		112	73-138			
Surrogate: 1,2-Dichloroethane-d4	49.8		"	50.0000		99.5	70-128			
Surrogate: Toluene-d8	52.5		"	50.0000		105	87-114			
Surrogate: 4-Bromofluorobenzene	51.4		"	50.0000		103	83-117			

Matrix Spike Dup (1E00323-MSD1)

Source: 10D1188-01

Prepared & Analyzed: 05/03/10

Vinyl Chloride	1033	10.0	ug/l	969.500	ND	107	76-138	7.85	18	
1,1-Dichloroethylene	555.5	10.0	"	500.000	ND	111	75-140	8.94	17	
trans-1,2-Dichloroethylene	543.3	10.0	"	500.000	ND	109	74-140	9.18	18	
cis-1,2-Dichloroethylene	533.0	10.0	"	500.000	ND	107	74-132	9.47	18	
Trichloroethylene	532.0	10.0	"	500.000	ND	106	71-129	11.3	21	
Tetrachloroethylene	513.7	10.0	"	500.000	ND	103	68-128	9.39	18	
Surrogate: Dibromofluoromethane	51.2		"	50.0000		102	73-138			
Surrogate: 1,2-Dichloroethane-d4	50.9		"	50.0000		102	70-128			
Surrogate: Toluene-d8	52.5		"	50.0000		105	87-114			
Surrogate: 4-Bromofluorobenzene	52.0		"	50.0000		104	83-117			

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

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Determination of Conventional Chemistry Parameters - Quality Control

Keystone Laboratories, Inc. - Newton

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 1D02924 - Wet Chem Preparation

Duplicate (1D02924-DUP1) Source: 10D1334-01 Prepared & Analyzed: 04/29/10

% Solids	6.61	0.1	%		6.64			0.453	20	
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Duplicate (1D02924-DUP2) Source: 10D1226-01 Prepared & Analyzed: 04/29/10

% Solids	0.140	0.1	%		0.140			0.00	20	
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1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

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Certified Analyses Included in This Report

Method/Matrix	Analyte	Certifications
EPA 8260B in Soil	Chloromethane	IA-NT,KS-NT,NELAC
	Vinyl Chloride	IA-NT,KS-NT,NELAC
	Vinyl Chloride	IA-NT,KS-NT,NELAC
	Bromomethane	IA-NT,KS-NT,NELAC
	Chloroethane	IA-NT,KS-NT,NELAC
	1,1-Dichloroethylene	IA-NT,KS-NT,NELAC
	1,1-Dichloroethylene	IA-NT,KS-NT,NELAC
	Acetone	IA-NT,KS-NT,NELAC
	Carbon Disulfide	IA-NT,KS-NT,NELAC
	Methylene Chloride	IA-NT,KS-NT,NELAC
	trans-1,2-Dichloroethylene	IA-NT,KS-NT,NELAC
	trans-1,2-Dichloroethylene	IA-NT,KS-NT,NELAC
	Methyl-t-butyl Ether (MTBE)	IA-NT,KS-NT,NELAC
	1,1-Dichloroethane	IA-NT,KS-NT,NELAC
	cis-1,2-Dichloroethylene	SIAIX
	cis-1,2-Dichloroethylene	SIAIX
	2-Butanone (MEK)	IA-NT,KS-NT,NELAC
	Chloroform	IA-NT,KS-NT,NELAC
	1,1,1-Trichloroethane	IA-NT,KS-NT,NELAC
	Carbon Tetrachloride	IA-NT,KS-NT,NELAC
	Benzene	IA-NT,KS-NT,NELAC
	1,2-Dichloroethane	IA-NT,KS-NT,NELAC
	Trichloroethylene	IA-NT,KS-NT,NELAC
	Trichloroethylene	IA-NT,KS-NT,NELAC
	1,2-Dichloropropane	IA-NT,KS-NT,NELAC
	Bromodichloromethane	IA-NT,KS-NT,NELAC
	cis-1,3-Dichloropropene	IA-NT,KS-NT,NELAC
	4-Methyl-2-pentanone (MIBK)	IA-NT,KS-NT,NELAC
	Toluene	IA-NT,KS-NT,NELAC
	trans-1,3-Dichloropropene	IA-NT,KS-NT,NELAC
	1,1,2-Trichloroethane	IA-NT,KS-NT,NELAC
	Tetrachloroethylene	IA-NT,KS-NT,NELAC
	Tetrachloroethylene	IA-NT,KS-NT,NELAC
	2-Hexanone (MBK)	IA-NT,KS-NT,NELAC
	Dibromochloromethane	IA-NT,KS-NT,NELAC
	Chlorobenzene	IA-NT,KS-NT,NELAC
	Ethylbenzene	IA-NT,KS-NT,NELAC
	Xylenes, total	IA-NT,KS-NT,NELAC
	Bromoform	IA-NT,KS-NT,NELAC
	1,1,2,2-Tetrachloroethane	IA-NT,KS-NT,NELAC
	1,3-Dichlorobenzene	IA-NT,KS-NT,NELAC
	1,4-Dichlorobenzene	IA-NT,KS-NT,NELAC
	1,2-Dichlorobenzene	IA-NT,KS-NT,NELAC
	Naphthalene	KS-NT,NELAC

EPA 8260B in Water

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

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Chloromethane	IA-NT,KS-NT,NELAC
Vinyl Chloride	IA-NT,KS-NT,NELAC
Vinyl Chloride	IA-NT,KS-NT,NELAC
Bromomethane	IA-NT,KS-NT,NELAC
Chloroethane	IA-NT,KS-NT,NELAC
Trichlorofluoromethane	IA-NT,KS-NT,NELAC
1,1-Dichloroethylene	IA-NT,KS-NT,NELAC
1,1-Dichloroethylene	IA-NT,KS-NT,NELAC
Acetone	IA-NT,KS-NT,NELAC
Methyl Iodide	SIA1X
Carbon Disulfide	IA-NT,KS-NT,NELAC
Methylene Chloride	IA-NT,KS-NT,NELAC
Acrylonitrile	IA-NT,KS-NT,NELAC
trans-1,2-Dichloroethylene	IA-NT,KS-NT,NELAC
trans-1,2-Dichloroethylene	IA-NT,KS-NT,NELAC
1,1-Dichloroethane	IA-NT,KS-NT,NELAC
Vinyl Acetate	SIA1X
cis-1,2-Dichloroethylene	SIA1X
cis-1,2-Dichloroethylene	SIA1X
2-Butanone (MEK)	IA-NT,KS-NT,NELAC
Chloroform	IA-NT,KS-NT,NELAC
1,1,1-Trichloroethane	IA-NT,KS-NT,NELAC
Carbon Tetrachloride	IA-NT,KS-NT,NELAC
Benzene	IA-NT,KS-NT,NELAC
1,2-Dichloroethane	IA-NT,KS-NT,NELAC
Trichloroethylene	IA-NT,KS-NT,NELAC
Trichloroethylene	IA-NT,KS-NT,NELAC
1,2-Dichloropropane	IA-NT,KS-NT,NELAC
Dibromomethane	SIA1X
Bromodichloromethane	IA-NT,KS-NT,NELAC
cis-1,3-Dichloropropene	IA-NT,KS-NT,NELAC
4-Methyl-2-pentanone (MIBK)	IA-NT,KS-NT,NELAC
Toluene	IA-NT,KS-NT,NELAC
trans-1,3-Dichloropropene	IA-NT,KS-NT,NELAC
1,1,2-Trichloroethane	IA-NT,KS-NT,NELAC
Tetrachloroethylene	IA-NT,KS-NT,NELAC
Tetrachloroethylene	IA-NT,NELAC,KS-NT
2-Hexanone (MBK)	IA-NT,KS-NT,NELAC
Dibromochloromethane	IA-NT,KS-NT,NELAC
1,2-Dibromoethane	SIA1X
Chlorobenzene	IA-NT,KS-NT,NELAC
1,1,1,2-Tetrachloroethane	IA-NT,KS-NT,NELAC
Ethylbenzene	IA-NT,KS-NT,NELAC
Xylenes, total	IA-NT,KS-NT,NELAC
Styrene	IA-NT,KS-NT,NELAC
Bromoform	IA-NT,KS-NT,NELAC
1,2,3-Trichloropropane	SIA1X
trans-1,4-Dichloro-2-butene	SIA1X
1,1,2,2-Tetrachloroethane	IA-NT,KS-NT,NELAC
1,4-Dichlorobenzene	IA-NT,KS-NT,NELAC
1,2-Dichlorobenzene	IA-NT,KS-NT,NELAC

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

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SM 2540 G in Sludge

1,2-Dibromo-3-chloropropane	SIA1X
% Solids	SIA1X

Code	Certifying Authority	Certificate Number	Expires
KS-NT	Kansas Department of Health and Environment	E-10287	07/31/2010
NELAC	New Jersey Department of Environmental Protection	IA001	06/30/2010
SIA1X	Iowa Department of Natural Resources	95	04/01/2010

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West Des Moines IA, 50265

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Notes and Definitions

- S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.
- R-06 The Reporting Limits for this analysis are elevated due to excessive sediment in the sample container.
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate (CLP E-flag).
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

Barker-Lemar Associates
1801 Industrial Circle
West Des Moines IA, 50265

Project: SJ Project
Project Number: SNSHN 09000
Project Manager: Sid Juwarker

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05/04/10 16:29

Sue Thompson

Sue Thompson
Project Manager I

CHAIN OF CUSTODY RECORD

Keystone
LABORATORIES, INC.

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PAGE 1 OF 1

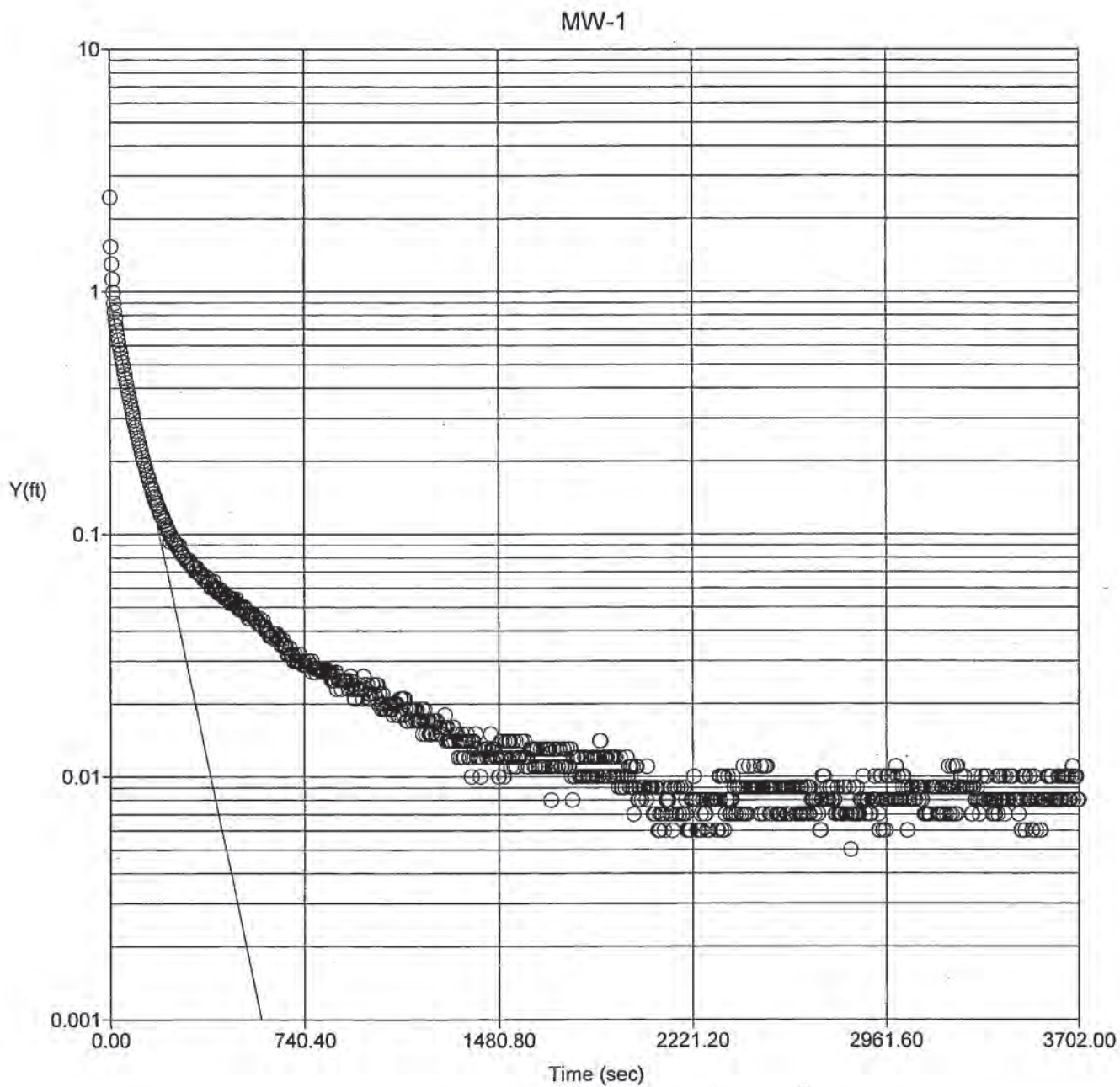
PRINT OR TYPE INFORMATION BELOW SAMPLER: <u>M. Dixon</u> SITE NAME: <u>SW SHN 09000</u> ADDRESS: _____ CITY/ST/ZIP: <u>FORT DODGE, IA</u> PHONE: _____	REPORT TO: NAME: <u>Sid J.</u> COMPANY NAME: <u>BARKER LEMAR</u> ADDRESS: _____ CITY/ST/ZIP: _____ PHONE: _____ FAX: _____	BILL TO: NAME: _____ COMPANY NAME: <u>BARKER LEMAR</u> ADDRESS: _____ CITY/ST/ZIP: _____ PHONE: _____ Keystone Quote No.: _____ <div style="text-align: right; font-size: small;">(If Applicable)</div>
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CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	ANALYSES REQUIRED										LAB USE ONLY			
							EPA Method 8260												LABORATORY WORK ORDER NO.	LABORATORY SAMPLE NUMBER
SAMPLE TEMPERATURE UPON RECEIPT:													°C	SAMPLE CONDITION/COMMENTS						
mw-6	4/22/10		9' mw-6	1	Soil	G	✓										01			
mw-5	4/22/10		mw-5	6	H ₂ O	G	✓										02			
mw-6	4/22/10		mw-6	6	H ₂ O	G	✓										03			

Relinquished by: (Signature) <u>M. Dixon</u>	Date <u>4/23/10</u> Time <u>7:30 AM</u>	Received by: (Signature) <u>Fridge</u>	Date <u>4/23/10</u> Time <u>7:30 AM</u>	Turn-Around: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush	Contact Lab Prior to Submission
Relinquished by: (Signature)	Date Time	Received for Lab by: (Signature) <u>Bice</u>	Date <u>4/23/10</u> Time <u>12:55 PM</u>	Remarks: <u>EPA Method 8260 for:</u> <u>PCE, TCE, DCE, & vinyl chloride</u>	

ATTACHMENT C

Hydraulic Conductivity Data



LUST No.:	Site Name: Sunshine Laundry		
Hydraulic Conductivity: 0.548 m/day	Well: MW-1	Slug Test Date: 01/28/2010	
Barker Lemar Engineering Consultants		CGWP: Leah Calvert, 2017	

BOUWER-RICE SLUG TEST ANALYSIS

SITE

Sunshine Laundry
2422 5th Avenue South
Fort Dodge, Iowa, 50501-5551

CLIENT

CONSULTANT

Barker Lemar Engineering Consultants
1801 Industrial Circle
West Des Moines, IA, 50265
Certified Groundwater Professional: Leah Calvert, 2017

SLUG TEST

Hydraulic Conductivity: 0.548 m/day

Monitoring Well: MW-1
Test Date: 01/28/2010
Field Testing by: Kris Sommer
Test Analysis by: Leah Calvert

WELL GEOMETRY

H: 29.7 ft
Lw: 14.85 ft
Le: 14.85 ft
dw: 7.25 in, rw: 3.63 in
dc: 2 in, rc: 1.0 in
Drained Filter Pack Porosity (%): 15
Effective Radius (re): 1.68 in
Slug Volume(L): 1

BOUWER-RICE COEFFICIENTS

Le/rw: 49.2
A: 2.92
B: 0.446
C: 2.6
Ln(Re/rw): 2.65

LEAST SQUARES BEST FIT

Ln(Y)-cm versus Time-sec
Slope: -1.19e-02
Intercept: 3.34

Slug Test Type: Rising head
Recovery Data Type: H: Groundwater Head
Static Water Level: 13.391 ft

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
0	10.939	Ignore	2.452	0.924
3	11.858	Ignore	1.533	0.892
6	12.094	Ignore	1.297	0.861
9	12.266	Ignore	1.125	0.83
12	12.399	Ignore	0.992	0.801
15	12.495	Use	0.896	0.773
18	12.564	Use	0.827	0.746
21	12.623	Use	0.768	0.72
24	12.668	Use	0.723	0.695
27	12.701	Use	0.69	0.67
30	12.733	Use	0.658	0.647
33	12.761	Use	0.63	0.624
36	12.788	Use	0.603	0.602
39	12.813	Use	0.578	0.581
42	12.834	Use	0.557	0.561
45	12.859	Use	0.532	0.541
48	12.879	Use	0.512	0.522
51	12.897	Use	0.494	0.504
54	12.916	Use	0.475	0.486
57	12.934	Use	0.457	0.469
60	12.952	Use	0.439	0.453
63	12.969	Use	0.422	0.437
66	12.985	Use	0.406	0.422
69	12.999	Use	0.392	0.407
72	13.014	Use	0.377	0.393
75	13.027	Use	0.364	0.379
78	13.039	Use	0.352	0.365
81	13.053	Use	0.338	0.353
84	13.065	Use	0.326	0.34
87	13.075	Use	0.316	0.328
90	13.088	Use	0.303	0.317
93	13.096	Use	0.295	0.306
96	13.108	Use	0.283	0.295
99	13.115	Use	0.276	0.285
102	13.124	Use	0.267	0.275
105	13.133	Use	0.258	0.265
108	13.143	Use	0.248	0.256
111	13.149	Use	0.242	0.247
114	13.158	Use	0.233	0.238
117	13.164	Use	0.227	0.23
120	13.171	Use	0.22	0.222
123	13.179	Use	0.212	0.214
126	13.184	Use	0.207	0.207
129	13.191	Use	0.2	0.199
132	13.196	Use	0.195	0.192
135	13.199	Use	0.192	0.186
138	13.206	Use	0.185	0.179
141	13.209	Use	0.182	0.173
144	13.217	Use	0.174	0.167
147	13.219	Use	0.172	0.161

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
150	13.224	Use	0.167	0.155
153	13.229	Use	0.162	0.15
156	13.232	Ignore	0.159	0.145
159	13.236	Ignore	0.155	0.139
162	13.239	Ignore	0.152	0.135
165	13.244	Ignore	0.147	0.13
168	13.249	Ignore	0.142	0.125
171	13.249	Ignore	0.142	0.121
174	13.252	Ignore	0.139	0.117
177	13.257	Ignore	0.134	0.113
180	13.259	Ignore	0.132	0.109
183	13.26	Ignore	0.131	0.105
186	13.264	Ignore	0.127	0.101
189	13.267	Ignore	0.124	0.0976
192	13.27	Ignore	0.121	0.0942
195	13.272	Ignore	0.119	0.0909
198	13.272	Ignore	0.119	0.0877
201	13.275	Ignore	0.116	0.0846
204	13.277	Ignore	0.114	0.0817
207	13.278	Ignore	0.113	0.0788
210	13.282	Ignore	0.109	0.076
213	13.282	Ignore	0.109	0.0734
216	13.285	Ignore	0.106	0.0708
219	13.287	Ignore	0.104	0.0683
222	13.288	Ignore	0.103	0.0659
225	13.29	Ignore	0.101	0.0636
228	13.298	Ignore	0.093	0.0614
231	13.293	Ignore	0.098	0.0592
234	13.295	Ignore	0.096	0.0572
237	13.297	Ignore	0.094	0.0552
240	13.296	Ignore	0.095	0.0532
243	13.298	Ignore	0.093	0.0514
246	13.298	Ignore	0.093	0.0496
249	13.3	Ignore	0.091	0.0478
252	13.301	Ignore	0.09	0.0461
255	13.303	Ignore	0.088	0.0445
258	13.301	Ignore	0.09	0.043
261	13.301	Ignore	0.09	0.0415
264	13.306	Ignore	0.085	0.04
267	13.306	Ignore	0.085	0.0386
270	13.308	Ignore	0.083	0.0373
273	13.308	Ignore	0.083	0.0359
276	13.308	Ignore	0.083	0.0347
279	13.31	Ignore	0.081	0.0335
282	13.311	Ignore	0.08	0.0323
285	13.311	Ignore	0.08	0.0312
288	13.313	Ignore	0.078	0.0301
291	13.313	Ignore	0.078	0.029
294	13.313	Ignore	0.078	0.028
297	13.315	Ignore	0.076	0.027
300	13.313	Ignore	0.078	0.0261
303	13.316	Ignore	0.075	0.0252
306	13.315	Ignore	0.076	0.0243
309	13.316	Ignore	0.075	0.0234

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
312	13.318	Ignore	0.073	0.0226
315	13.318	Ignore	0.073	0.0218
318	13.318	Ignore	0.073	0.021
321	13.318	Ignore	0.073	0.0203
324	13.321	Ignore	0.07	0.0196
327	13.318	Ignore	0.073	0.0189
330	13.319	Ignore	0.072	0.0182
333	13.322	Ignore	0.069	0.0176
336	13.322	Ignore	0.069	0.017
339	13.322	Ignore	0.069	0.0164
342	13.322	Ignore	0.069	0.0158
345	13.322	Ignore	0.069	0.0153
348	13.324	Ignore	0.067	0.0147
351	13.324	Ignore	0.067	0.0142
354	13.326	Ignore	0.065	0.0137
357	13.326	Ignore	0.065	0.0132
360	13.326	Ignore	0.065	0.0128
363	13.324	Ignore	0.067	0.0123
366	13.327	Ignore	0.064	0.0119
369	13.327	Ignore	0.064	0.0115
372	13.327	Ignore	0.064	0.0111
375	13.326	Ignore	0.065	0.0107
378	13.329	Ignore	0.062	0.0103
381	13.327	Ignore	0.064	0.00995
384	13.331	Ignore	0.06	0.0096
387	13.331	Ignore	0.06	0.00926
390	13.331	Ignore	0.06	0.00894
393	13.327	Ignore	0.064	0.00863
396	13.332	Ignore	0.059	0.00832
399	13.332	Ignore	0.059	0.00803
402	13.332	Ignore	0.059	0.00775
405	13.331	Ignore	0.06	0.00748
408	13.332	Ignore	0.059	0.00722
411	13.334	Ignore	0.057	0.00696
414	13.334	Ignore	0.057	0.00672
417	13.332	Ignore	0.059	0.00648
420	13.334	Ignore	0.057	0.00626
423	13.334	Ignore	0.057	0.00604
426	13.334	Ignore	0.057	0.00583
429	13.334	Ignore	0.057	0.00562
432	13.336	Ignore	0.055	0.00542
435	13.334	Ignore	0.057	0.00523
438	13.336	Ignore	0.055	0.00505
441	13.337	Ignore	0.054	0.00487
444	13.336	Ignore	0.055	0.0047
447	13.336	Ignore	0.055	0.00454
450	13.337	Ignore	0.054	0.00438
453	13.337	Ignore	0.054	0.00423
456	13.339	Ignore	0.052	0.00408
459	13.337	Ignore	0.054	0.00393
462	13.337	Ignore	0.054	0.0038
465	13.339	Ignore	0.052	0.00366
468	13.337	Ignore	0.054	0.00354
471	13.339	Ignore	0.052	0.00341

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
474	13.339	Ignore	0.052	0.00329
477	13.337	Ignore	0.054	0.00318
480	13.339	Ignore	0.052	0.00306
483	13.341	Ignore	0.05	0.00296
486	13.341	Ignore	0.05	0.00285
489	13.342	Ignore	0.049	0.00275
492	13.341	Ignore	0.05	0.00266
495	13.341	Ignore	0.05	0.00256
498	13.341	Ignore	0.05	0.00247
501	13.342	Ignore	0.049	0.00239
504	13.341	Ignore	0.05	0.0023
507	13.341	Ignore	0.05	0.00222
510	13.341	Ignore	0.05	0.00215
513	13.342	Ignore	0.049	0.00207
516	13.344	Ignore	0.047	0.002
519	13.344	Ignore	0.047	0.00193
522	13.344	Ignore	0.047	0.00186
525	13.346	Ignore	0.045	0.00179
528	13.344	Ignore	0.047	0.00173
531	13.346	Ignore	0.045	0.00167
534	13.344	Ignore	0.047	0.00161
537	13.344	Ignore	0.047	0.00156
540	13.344	Ignore	0.047	0.0015
543	13.344	Ignore	0.047	0.00145
546	13.346	Ignore	0.045	0.0014
549	13.346	Ignore	0.045	0.00135
552	13.346	Ignore	0.045	0.0013
555	13.346	Ignore	0.045	0.00126
558	13.347	Ignore	0.044	0.00121
561	13.348	Ignore	0.043	0.00117
564	13.347	Ignore	0.044	0.00113
567	13.348	Ignore	0.043	0.00109
570	13.346	Ignore	0.045	0.00105
573	13.349	Ignore	0.042	0.00101
576	13.349	Ignore	0.042	9.79e-04
579	13.349	Ignore	0.042	9.44e-04
582	13.347	Ignore	0.044	9.11e-04
585	13.349	Ignore	0.042	8.79e-04
588	13.349	Ignore	0.042	8.48e-04
591	13.351	Ignore	0.04	8.19e-04
594	13.351	Ignore	0.04	7.90e-04
597	13.351	Ignore	0.04	7.62e-04
600	13.351	Ignore	0.04	7.36e-04
603	13.352	Ignore	0.039	7.10e-04
606	13.353	Ignore	0.038	6.85e-04
609	13.353	Ignore	0.038	6.61e-04
612	13.353	Ignore	0.038	6.38e-04
615	13.353	Ignore	0.038	6.15e-04
618	13.353	Ignore	0.038	5.94e-04
621	13.352	Ignore	0.039	5.73e-04
624	13.352	Ignore	0.039	5.53e-04
627	13.354	Ignore	0.037	5.33e-04
630	13.353	Ignore	0.038	5.15e-04
633	13.353	Ignore	0.038	4.97e-04

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
636	13.352	Ignore	0.039	4.79e-04
639	13.354	Ignore	0.037	4.63e-04
642	13.354	Ignore	0.037	4.46e-04
645	13.353	Ignore	0.038	4.31e-04
648	13.354	Ignore	0.037	4.16e-04
651	13.356	Ignore	0.035	4.01e-04
654	13.356	Ignore	0.035	3.87e-04
657	13.354	Ignore	0.037	3.73e-04
660	13.356	Ignore	0.035	3.60e-04
663	13.356	Ignore	0.035	3.48e-04
666	13.357	Ignore	0.034	3.35e-04
669	13.356	Ignore	0.035	3.24e-04
672	13.357	Ignore	0.034	3.12e-04
675	13.359	Ignore	0.032	3.01e-04
678	13.359	Ignore	0.032	2.91e-04
681	13.359	Ignore	0.032	2.81e-04
684	13.357	Ignore	0.034	2.71e-04
687	13.359	Ignore	0.032	2.61e-04
690	13.359	Ignore	0.032	2.52e-04
693	13.359	Ignore	0.032	2.43e-04
696	13.359	Ignore	0.032	2.35e-04
699	13.361	Ignore	0.03	2.27e-04
702	13.361	Ignore	0.03	2.19e-04
705	13.359	Ignore	0.032	2.11e-04
708	13.361	Ignore	0.03	2.04e-04
711	13.361	Ignore	0.03	1.96e-04
714	13.361	Ignore	0.03	1.90e-04
717	13.361	Ignore	0.03	1.83e-04
720	13.361	Ignore	0.03	1.77e-04
723	13.359	Ignore	0.032	1.70e-04
726	13.361	Ignore	0.03	1.64e-04
729	13.361	Ignore	0.03	1.59e-04
732	13.362	Ignore	0.029	1.53e-04
735	13.362	Ignore	0.029	1.48e-04
738	13.362	Ignore	0.029	1.42e-04
741	13.361	Ignore	0.03	1.37e-04
744	13.362	Ignore	0.029	1.33e-04
747	13.362	Ignore	0.029	1.28e-04
750	13.362	Ignore	0.029	1.24e-04
753	13.361	Ignore	0.03	1.19e-04
756	13.361	Ignore	0.03	1.15e-04
759	13.362	Ignore	0.029	1.11e-04
762	13.362	Ignore	0.029	1.07e-04
765	13.362	Ignore	0.029	1.03e-04
768	13.361	Ignore	0.03	9.97e-05
771	13.364	Ignore	0.027	9.62e-05
774	13.363	Ignore	0.028	9.29e-05
777	13.363	Ignore	0.028	8.96e-05
780	13.363	Ignore	0.028	8.65e-05
783	13.364	Ignore	0.027	8.34e-05
786	13.363	Ignore	0.028	8.05e-05
789	13.363	Ignore	0.028	7.77e-05
792	13.363	Ignore	0.028	7.50e-05
795	13.363	Ignore	0.028	7.23e-05

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
798	13.363	Ignore	0.028	6.98e-05
801	13.363	Ignore	0.028	6.74e-05
804	13.363	Ignore	0.028	6.50e-05
807	13.364	Ignore	0.027	6.27e-05
810	13.363	Ignore	0.028	6.05e-05
813	13.364	Ignore	0.027	5.84e-05
816	13.363	Ignore	0.028	5.64e-05
819	13.364	Ignore	0.027	5.44e-05
822	13.363	Ignore	0.028	5.25e-05
825	13.364	Ignore	0.027	5.06e-05
828	13.364	Ignore	0.027	4.89e-05
831	13.364	Ignore	0.027	4.71e-05
834	13.364	Ignore	0.027	4.55e-05
837	13.364	Ignore	0.027	4.39e-05
840	13.364	Ignore	0.027	4.24e-05
843	13.366	Ignore	0.025	4.09e-05
846	13.364	Ignore	0.027	3.94e-05
849	13.366	Ignore	0.025	3.81e-05
852	13.366	Ignore	0.025	3.67e-05
855	13.366	Ignore	0.025	3.54e-05
858	13.366	Ignore	0.025	3.42e-05
861	13.364	Ignore	0.027	3.30e-05
864	13.368	Ignore	0.023	3.18e-05
867	13.365	Ignore	0.026	3.07e-05
870	13.366	Ignore	0.025	2.96e-05
873	13.366	Ignore	0.025	2.86e-05
876	13.366	Ignore	0.025	2.76e-05
879	13.366	Ignore	0.025	2.66e-05
882	13.368	Ignore	0.023	2.57e-05
885	13.366	Ignore	0.025	2.48e-05
888	13.366	Ignore	0.025	2.39e-05
891	13.366	Ignore	0.025	2.31e-05
894	13.366	Ignore	0.025	2.23e-05
897	13.366	Ignore	0.025	2.15e-05
900	13.366	Ignore	0.025	2.07e-05
903	13.366	Ignore	0.025	2.00e-05
906	13.366	Ignore	0.025	1.93e-05
909	13.368	Ignore	0.023	1.86e-05
912	13.368	Ignore	0.023	1.80e-05
915	13.366	Ignore	0.025	1.74e-05
918	13.365	Ignore	0.026	1.68e-05
921	13.367	Ignore	0.024	1.62e-05
924	13.368	Ignore	0.023	1.56e-05
927	13.367	Ignore	0.024	1.51e-05
930	13.368	Ignore	0.023	1.45e-05
933	13.37	Ignore	0.021	1.40e-05
936	13.37	Ignore	0.021	1.35e-05
939	13.368	Ignore	0.023	1.30e-05
942	13.368	Ignore	0.023	1.26e-05
945	13.368	Ignore	0.023	1.22e-05
948	13.367	Ignore	0.024	1.17e-05
951	13.368	Ignore	0.023	1.13e-05
954	13.368	Ignore	0.023	1.09e-05
957	13.368	Ignore	0.023	1.05e-05

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
960	13.368	Ignore	0.023	1.02e-05
963	13.37	Ignore	0.021	9.81e-06
966	13.365	Ignore	0.026	9.46e-06
969	13.367	Ignore	0.024	9.13e-06
972	13.368	Ignore	0.023	8.81e-06
975	13.368	Ignore	0.023	8.50e-06
978	13.368	Ignore	0.023	8.21e-06
981	13.367	Ignore	0.024	7.92e-06
984	13.369	Ignore	0.022	7.64e-06
987	13.37	Ignore	0.021	7.37e-06
990	13.369	Ignore	0.022	7.11e-06
993	13.37	Ignore	0.021	6.87e-06
996	13.369	Ignore	0.022	6.62e-06
999	13.367	Ignore	0.024	6.39e-06
1002	13.367	Ignore	0.024	6.17e-06
1005	13.369	Ignore	0.022	5.95e-06
1008	13.369	Ignore	0.022	5.74e-06
1011	13.369	Ignore	0.022	5.54e-06
1014	13.367	Ignore	0.024	5.35e-06
1017	13.37	Ignore	0.021	5.16e-06
1020	13.367	Ignore	0.024	4.98e-06
1023	13.371	Ignore	0.02	4.80e-06
1026	13.369	Ignore	0.022	4.64e-06
1029	13.369	Ignore	0.022	4.47e-06
1032	13.371	Ignore	0.02	4.32e-06
1035	13.372	Ignore	0.019	4.17e-06
1038	13.369	Ignore	0.022	4.02e-06
1041	13.371	Ignore	0.02	3.88e-06
1044	13.372	Ignore	0.019	3.74e-06
1047	13.372	Ignore	0.019	3.61e-06
1050	13.371	Ignore	0.02	3.49e-06
1053	13.372	Ignore	0.019	3.36e-06
1056	13.372	Ignore	0.019	3.25e-06
1059	13.371	Ignore	0.02	3.13e-06
1062	13.371	Ignore	0.02	3.02e-06
1065	13.372	Ignore	0.019	2.92e-06
1068	13.371	Ignore	0.02	2.81e-06
1071	13.372	Ignore	0.019	2.71e-06
1074	13.372	Ignore	0.019	2.62e-06
1077	13.371	Ignore	0.02	2.53e-06
1080	13.373	Ignore	0.018	2.44e-06
1083	13.371	Ignore	0.02	2.35e-06
1086	13.371	Ignore	0.02	2.27e-06
1089	13.371	Ignore	0.02	2.19e-06
1092	13.371	Ignore	0.02	2.11e-06
1095	13.373	Ignore	0.018	2.04e-06
1098	13.373	Ignore	0.018	1.97e-06
1101	13.373	Ignore	0.018	1.90e-06
1104	13.37	Ignore	0.021	1.83e-06
1107	13.37	Ignore	0.021	1.77e-06
1110	13.373	Ignore	0.018	1.71e-06
1113	13.37	Ignore	0.021	1.65e-06
1116	13.37	Ignore	0.021	1.59e-06
1119	13.373	Ignore	0.018	1.53e-06

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1122	13.37	Ignore	0.021	1.48e-06
1125	13.372	Ignore	0.019	1.43e-06
1128	13.374	Ignore	0.017	1.38e-06
1131	13.374	Ignore	0.017	1.33e-06
1134	13.374	Ignore	0.017	1.28e-06
1137	13.372	Ignore	0.019	1.24e-06
1140	13.372	Ignore	0.019	1.19e-06
1143	13.372	Ignore	0.019	1.15e-06
1146	13.372	Ignore	0.019	1.11e-06
1149	13.372	Ignore	0.019	1.07e-06
1152	13.374	Ignore	0.017	1.04e-06
1155	13.372	Ignore	0.019	1.00e-06
1158	13.372	Ignore	0.019	9.65e-07
1161	13.372	Ignore	0.019	9.31e-07
1164	13.374	Ignore	0.017	8.98e-07
1167	13.372	Ignore	0.019	8.67e-07
1170	13.374	Ignore	0.017	8.36e-07
1173	13.374	Ignore	0.017	8.07e-07
1176	13.374	Ignore	0.017	7.79e-07
1179	13.374	Ignore	0.017	7.51e-07
1182	13.374	Ignore	0.017	7.25e-07
1185	13.374	Ignore	0.017	7.00e-07
1188	13.372	Ignore	0.019	6.75e-07
1191	13.376	Ignore	0.015	6.52e-07
1194	13.374	Ignore	0.017	6.29e-07
1197	13.372	Ignore	0.019	6.07e-07
1200	13.374	Ignore	0.017	5.85e-07
1203	13.376	Ignore	0.015	5.65e-07
1206	13.374	Ignore	0.017	5.45e-07
1209	13.374	Ignore	0.017	5.26e-07
1212	13.374	Ignore	0.017	5.08e-07
1215	13.376	Ignore	0.015	4.90e-07
1218	13.374	Ignore	0.017	4.73e-07
1221	13.376	Ignore	0.015	4.56e-07
1224	13.376	Ignore	0.015	4.40e-07
1227	13.376	Ignore	0.015	4.25e-07
1230	13.374	Ignore	0.017	4.10e-07
1233	13.374	Ignore	0.017	3.95e-07
1236	13.374	Ignore	0.017	3.81e-07
1239	13.376	Ignore	0.015	3.68e-07
1242	13.374	Ignore	0.017	3.55e-07
1245	13.374	Ignore	0.017	3.43e-07
1248	13.376	Ignore	0.015	3.31e-07
1251	13.375	Ignore	0.016	3.19e-07
1254	13.375	Ignore	0.016	3.08e-07
1257	13.375	Ignore	0.016	2.97e-07
1260	13.376	Ignore	0.015	2.87e-07
1263	13.376	Ignore	0.015	2.77e-07
1266	13.376	Ignore	0.015	2.67e-07
1269	13.375	Ignore	0.016	2.58e-07
1272	13.375	Ignore	0.016	2.49e-07
1275	13.373	Ignore	0.018	2.40e-07
1278	13.375	Ignore	0.016	2.31e-07
1281	13.377	Ignore	0.014	2.23e-07

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1284	13.375	Ignore	0.016	2.16e-07
1287	13.377	Ignore	0.014	2.08e-07
1290	13.377	Ignore	0.014	2.01e-07
1293	13.377	Ignore	0.014	1.94e-07
1296	13.377	Ignore	0.014	1.87e-07
1299	13.377	Ignore	0.014	1.80e-07
1302	13.377	Ignore	0.014	1.74e-07
1305	13.375	Ignore	0.016	1.68e-07
1308	13.375	Ignore	0.016	1.62e-07
1311	13.377	Ignore	0.014	1.56e-07
1314	13.376	Ignore	0.015	1.51e-07
1317	13.376	Ignore	0.015	1.46e-07
1320	13.376	Ignore	0.015	1.40e-07
1323	13.376	Ignore	0.015	1.36e-07
1326	13.379	Ignore	0.012	1.31e-07
1329	13.377	Ignore	0.014	1.26e-07
1332	13.377	Ignore	0.014	1.22e-07
1335	13.379	Ignore	0.012	1.18e-07
1338	13.377	Ignore	0.014	1.13e-07
1341	13.376	Ignore	0.015	1.09e-07
1344	13.379	Ignore	0.012	1.06e-07
1347	13.377	Ignore	0.014	1.02e-07
1350	13.379	Ignore	0.012	9.83e-08
1353	13.377	Ignore	0.014	9.49e-08
1356	13.377	Ignore	0.014	9.15e-08
1359	13.376	Ignore	0.015	8.83e-08
1362	13.377	Ignore	0.014	8.52e-08
1365	13.377	Ignore	0.014	8.23e-08
1368	13.379	Ignore	0.012	7.94e-08
1371	13.379	Ignore	0.012	7.66e-08
1374	13.377	Ignore	0.014	7.39e-08
1377	13.381	Ignore	0.01	7.13e-08
1380	13.377	Ignore	0.014	6.88e-08
1383	13.377	Ignore	0.014	6.64e-08
1386	13.378	Ignore	0.013	6.41e-08
1389	13.378	Ignore	0.013	6.18e-08
1392	13.376	Ignore	0.015	5.97e-08
1395	13.379	Ignore	0.012	5.76e-08
1398	13.379	Ignore	0.012	5.56e-08
1401	13.378	Ignore	0.013	5.36e-08
1404	13.379	Ignore	0.012	5.17e-08
1407	13.379	Ignore	0.012	4.99e-08
1410	13.381	Ignore	0.01	4.82e-08
1413	13.379	Ignore	0.012	4.65e-08
1416	13.379	Ignore	0.012	4.48e-08
1419	13.378	Ignore	0.013	4.33e-08
1422	13.378	Ignore	0.013	4.18e-08
1425	13.378	Ignore	0.013	4.03e-08
1428	13.378	Ignore	0.013	3.89e-08
1431	13.378	Ignore	0.013	3.75e-08
1434	13.379	Ignore	0.012	3.62e-08
1437	13.378	Ignore	0.013	3.49e-08
1440	13.378	Ignore	0.013	3.37e-08
1443	13.379	Ignore	0.012	3.25e-08

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1446	13.379	Ignore	0.012	3.14e-08
1449	13.376	Ignore	0.015	3.03e-08
1452	13.378	Ignore	0.013	2.92e-08
1455	13.379	Ignore	0.012	2.82e-08
1458	13.378	Ignore	0.013	2.72e-08
1461	13.378	Ignore	0.013	2.63e-08
1464	13.378	Ignore	0.013	2.53e-08
1467	13.379	Ignore	0.012	2.45e-08
1470	13.379	Ignore	0.012	2.36e-08
1473	13.379	Ignore	0.012	2.28e-08
1476	13.379	Ignore	0.012	2.20e-08
1479	13.381	Ignore	0.01	2.12e-08
1482	13.381	Ignore	0.01	2.05e-08
1485	13.379	Ignore	0.012	1.97e-08
1488	13.377	Ignore	0.014	1.90e-08
1491	13.379	Ignore	0.012	1.84e-08
1494	13.377	Ignore	0.014	1.77e-08
1497	13.379	Ignore	0.012	1.71e-08
1500	13.381	Ignore	0.01	1.65e-08
1503	13.377	Ignore	0.014	1.59e-08
1506	13.379	Ignore	0.012	1.54e-08
1509	13.379	Ignore	0.012	1.48e-08
1512	13.377	Ignore	0.014	1.43e-08
1515	13.379	Ignore	0.012	1.38e-08
1518	13.377	Ignore	0.014	1.33e-08
1521	13.377	Ignore	0.014	1.29e-08
1524	13.377	Ignore	0.014	1.24e-08
1527	13.38	Ignore	0.011	1.20e-08
1530	13.379	Ignore	0.012	1.16e-08
1533	13.379	Ignore	0.012	1.12e-08
1536	13.377	Ignore	0.014	1.08e-08
1539	13.38	Ignore	0.011	1.04e-08
1542	13.379	Ignore	0.012	1.00e-08
1545	13.377	Ignore	0.014	9.67e-09
1548	13.38	Ignore	0.011	9.33e-09
1551	13.379	Ignore	0.012	9.00e-09
1554	13.379	Ignore	0.012	8.69e-09
1557	13.379	Ignore	0.012	8.38e-09
1560	13.379	Ignore	0.012	8.09e-09
1563	13.379	Ignore	0.012	7.81e-09
1566	13.377	Ignore	0.014	7.53e-09
1569	13.377	Ignore	0.014	7.27e-09
1572	13.379	Ignore	0.012	7.01e-09
1575	13.379	Ignore	0.012	6.77e-09
1578	13.377	Ignore	0.014	6.53e-09
1581	13.379	Ignore	0.012	6.30e-09
1584	13.38	Ignore	0.011	6.08e-09
1587	13.379	Ignore	0.012	5.87e-09
1590	13.379	Ignore	0.012	5.66e-09
1593	13.38	Ignore	0.011	5.46e-09
1596	13.38	Ignore	0.011	5.27e-09
1599	13.378	Ignore	0.013	5.09e-09
1602	13.378	Ignore	0.013	4.91e-09
1605	13.378	Ignore	0.013	4.74e-09

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1608	13.378	Ignore	0.013	4.57e-09
1611	13.378	Ignore	0.013	4.41e-09
1614	13.378	Ignore	0.013	4.26e-09
1617	13.38	Ignore	0.011	4.11e-09
1620	13.378	Ignore	0.013	3.96e-09
1623	13.38	Ignore	0.011	3.82e-09
1626	13.378	Ignore	0.013	3.69e-09
1629	13.378	Ignore	0.013	3.56e-09
1632	13.38	Ignore	0.011	3.44e-09
1635	13.38	Ignore	0.011	3.32e-09
1638	13.38	Ignore	0.011	3.20e-09
1641	13.378	Ignore	0.013	3.09e-09
1644	13.38	Ignore	0.011	2.98e-09
1647	13.38	Ignore	0.011	2.87e-09
1650	13.38	Ignore	0.011	2.77e-09
1653	13.38	Ignore	0.011	2.68e-09
1656	13.378	Ignore	0.013	2.58e-09
1659	13.38	Ignore	0.011	2.49e-09
1662	13.378	Ignore	0.013	2.40e-09
1665	13.378	Ignore	0.013	2.32e-09
1668	13.378	Ignore	0.013	2.24e-09
1671	13.378	Ignore	0.013	2.16e-09
1674	13.38	Ignore	0.011	2.08e-09
1677	13.378	Ignore	0.013	2.01e-09
1680	13.383	Ignore	0.008	1.94e-09
1683	13.38	Ignore	0.011	1.87e-09
1686	13.378	Ignore	0.013	1.81e-09
1689	13.378	Ignore	0.013	1.74e-09
1692	13.38	Ignore	0.011	1.68e-09
1695	13.38	Ignore	0.011	1.62e-09
1698	13.378	Ignore	0.013	1.57e-09
1701	13.378	Ignore	0.013	1.51e-09
1704	13.38	Ignore	0.011	1.46e-09
1707	13.38	Ignore	0.011	1.41e-09
1710	13.378	Ignore	0.013	1.36e-09
1713	13.378	Ignore	0.013	1.31e-09
1716	13.38	Ignore	0.011	1.27e-09
1719	13.38	Ignore	0.011	1.22e-09
1722	13.38	Ignore	0.011	1.18e-09
1725	13.378	Ignore	0.013	1.14e-09
1728	13.378	Ignore	0.013	1.10e-09
1731	13.38	Ignore	0.011	1.06e-09
1734	13.38	Ignore	0.011	1.02e-09
1737	13.38	Ignore	0.011	9.86e-10
1740	13.378	Ignore	0.013	9.51e-10
1743	13.378	Ignore	0.013	9.18e-10
1746	13.38	Ignore	0.011	8.86e-10
1749	13.38	Ignore	0.011	8.54e-10
1752	13.378	Ignore	0.013	8.25e-10
1755	13.378	Ignore	0.013	7.96e-10
1758	13.381	Ignore	0.01	7.68e-10
1761	13.383	Ignore	0.008	7.41e-10
1764	13.379	Ignore	0.012	7.15e-10
1767	13.379	Ignore	0.012	6.90e-10

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1770	13.381	Ignore	0.01	6.66e-10
1773	13.381	Ignore	0.01	6.42e-10
1776	13.379	Ignore	0.012	6.20e-10
1779	13.379	Ignore	0.012	5.98e-10
1782	13.379	Ignore	0.012	5.77e-10
1785	13.379	Ignore	0.012	5.57e-10
1788	13.381	Ignore	0.01	5.37e-10
1791	13.381	Ignore	0.01	5.19e-10
1794	13.379	Ignore	0.012	5.00e-10
1797	13.381	Ignore	0.01	4.83e-10
1800	13.381	Ignore	0.01	4.66e-10
1803	13.381	Ignore	0.01	4.50e-10
1806	13.381	Ignore	0.01	4.34e-10
1809	13.379	Ignore	0.012	4.19e-10
1812	13.381	Ignore	0.01	4.04e-10
1815	13.379	Ignore	0.012	3.90e-10
1818	13.381	Ignore	0.01	3.76e-10
1821	13.381	Ignore	0.01	3.63e-10
1824	13.381	Ignore	0.01	3.50e-10
1827	13.381	Ignore	0.01	3.38e-10
1830	13.381	Ignore	0.01	3.26e-10
1833	13.379	Ignore	0.012	3.15e-10
1836	13.381	Ignore	0.01	3.04e-10
1839	13.381	Ignore	0.01	2.93e-10
1842	13.379	Ignore	0.012	2.83e-10
1845	13.379	Ignore	0.012	2.73e-10
1848	13.379	Ignore	0.012	2.63e-10
1851	13.379	Ignore	0.012	2.54e-10
1854	13.381	Ignore	0.01	2.45e-10
1857	13.379	Ignore	0.012	2.37e-10
1860	13.381	Ignore	0.01	2.28e-10
1863	13.379	Ignore	0.012	2.20e-10
1866	13.377	Ignore	0.014	2.13e-10
1869	13.377	Ignore	0.014	2.05e-10
1872	13.379	Ignore	0.012	1.98e-10
1875	13.381	Ignore	0.01	1.91e-10
1878	13.381	Ignore	0.01	1.84e-10
1881	13.379	Ignore	0.012	1.78e-10
1884	13.379	Ignore	0.012	1.72e-10
1887	13.381	Ignore	0.01	1.66e-10
1890	13.379	Ignore	0.012	1.60e-10
1893	13.379	Ignore	0.012	1.54e-10
1896	13.381	Ignore	0.01	1.49e-10
1899	13.381	Ignore	0.01	1.44e-10
1902	13.381	Ignore	0.01	1.38e-10
1905	13.379	Ignore	0.012	1.34e-10
1908	13.379	Ignore	0.012	1.29e-10
1911	13.379	Ignore	0.012	1.24e-10
1914	13.379	Ignore	0.012	1.20e-10
1917	13.381	Ignore	0.01	1.16e-10
1920	13.379	Ignore	0.012	1.12e-10
1923	13.381	Ignore	0.01	1.08e-10
1926	13.379	Ignore	0.012	1.04e-10
1929	13.381	Ignore	0.01	1.00e-10

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1932	13.381	Ignore	0.01	9.69e-11
1935	13.381	Ignore	0.01	9.35e-11
1938	13.382	Ignore	0.009	9.03e-11
1941	13.379	Ignore	0.012	8.71e-11
1944	13.381	Ignore	0.01	8.40e-11
1947	13.382	Ignore	0.009	8.11e-11
1950	13.381	Ignore	0.01	7.82e-11
1953	13.382	Ignore	0.009	7.55e-11
1956	13.381	Ignore	0.01	7.29e-11
1959	13.381	Ignore	0.01	7.03e-11
1962	13.382	Ignore	0.009	6.78e-11
1965	13.381	Ignore	0.01	6.55e-11
1968	13.379	Ignore	0.012	6.32e-11
1971	13.381	Ignore	0.01	6.10e-11
1974	13.381	Ignore	0.01	5.88e-11
1977	13.38	Ignore	0.011	5.68e-11
1980	13.382	Ignore	0.009	5.48e-11
1983	13.38	Ignore	0.011	5.28e-11
1986	13.38	Ignore	0.011	5.10e-11
1989	13.382	Ignore	0.009	4.92e-11
1992	13.38	Ignore	0.011	4.75e-11
1995	13.384	Ignore	0.007	4.58e-11
1998	13.382	Ignore	0.009	4.42e-11
2001	13.38	Ignore	0.011	4.27e-11
2004	13.38	Ignore	0.011	4.12e-11
2007	13.38	Ignore	0.011	3.97e-11
2010	13.383	Ignore	0.008	3.83e-11
2013	13.382	Ignore	0.009	3.70e-11
2016	13.383	Ignore	0.008	3.57e-11
2019	13.382	Ignore	0.009	3.44e-11
2022	13.382	Ignore	0.009	3.32e-11
2025	13.383	Ignore	0.008	3.21e-11
2028	13.382	Ignore	0.009	3.09e-11
2031	13.382	Ignore	0.009	2.99e-11
2034	13.382	Ignore	0.009	2.88e-11
2037	13.382	Ignore	0.009	2.78e-11
2040	13.382	Ignore	0.009	2.68e-11
2043	13.383	Ignore	0.008	2.59e-11
2046	13.38	Ignore	0.011	2.50e-11
2049	13.382	Ignore	0.009	2.41e-11
2052	13.382	Ignore	0.009	2.33e-11
2055	13.382	Ignore	0.009	2.24e-11
2058	13.382	Ignore	0.009	2.17e-11
2061	13.382	Ignore	0.009	2.09e-11
2064	13.382	Ignore	0.009	2.02e-11
2067	13.382	Ignore	0.009	1.95e-11
2070	13.384	Ignore	0.007	1.88e-11
2073	13.384	Ignore	0.007	1.81e-11
2076	13.382	Ignore	0.009	1.75e-11
2079	13.384	Ignore	0.007	1.69e-11
2082	13.382	Ignore	0.009	1.63e-11
2085	13.382	Ignore	0.009	1.57e-11
2088	13.385	Ignore	0.006	1.52e-11
2091	13.385	Ignore	0.006	1.46e-11

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2094	13.384	Ignore	0.007	1.41e-11
2097	13.385	Ignore	0.006	1.36e-11
2100	13.384	Ignore	0.007	1.31e-11
2103	13.384	Ignore	0.007	1.27e-11
2106	13.384	Ignore	0.007	1.22e-11
2109	13.382	Ignore	0.009	1.18e-11
2112	13.385	Ignore	0.006	1.14e-11
2115	13.384	Ignore	0.007	1.10e-11
2118	13.383	Ignore	0.008	1.06e-11
2121	13.383	Ignore	0.008	1.02e-11
2124	13.383	Ignore	0.008	9.88e-12
2127	13.383	Ignore	0.008	9.53e-12
2130	13.383	Ignore	0.008	9.20e-12
2133	13.382	Ignore	0.009	8.88e-12
2136	13.384	Ignore	0.007	8.57e-12
2139	13.382	Ignore	0.009	8.27e-12
2142	13.384	Ignore	0.007	7.98e-12
2145	13.385	Ignore	0.006	7.70e-12
2148	13.382	Ignore	0.009	7.43e-12
2151	13.382	Ignore	0.009	7.17e-12
2154	13.382	Ignore	0.009	6.91e-12
2157	13.384	Ignore	0.007	6.67e-12
2160	13.384	Ignore	0.007	6.44e-12
2163	13.382	Ignore	0.009	6.21e-12
2166	13.382	Ignore	0.009	5.99e-12
2169	13.384	Ignore	0.007	5.78e-12
2172	13.384	Ignore	0.007	5.58e-12
2175	13.382	Ignore	0.009	5.39e-12
2178	13.382	Ignore	0.009	5.20e-12
2181	13.384	Ignore	0.007	5.02e-12
2184	13.384	Ignore	0.007	4.84e-12
2187	13.382	Ignore	0.009	4.67e-12
2190	13.382	Ignore	0.009	4.51e-12
2193	13.384	Ignore	0.007	4.35e-12
2196	13.383	Ignore	0.008	4.20e-12
2199	13.385	Ignore	0.006	4.05e-12
2202	13.385	Ignore	0.006	3.91e-12
2205	13.385	Ignore	0.006	3.77e-12
2208	13.385	Ignore	0.006	3.64e-12
2211	13.385	Ignore	0.006	3.51e-12
2214	13.385	Ignore	0.006	3.39e-12
2217	13.383	Ignore	0.008	3.27e-12
2220	13.383	Ignore	0.008	3.15e-12
2223	13.383	Ignore	0.008	3.04e-12
2226	13.381	Ignore	0.01	2.94e-12
2229	13.383	Ignore	0.008	2.83e-12
2232	13.383	Ignore	0.008	2.73e-12
2235	13.383	Ignore	0.008	2.64e-12
2238	13.385	Ignore	0.006	2.55e-12
2241	13.385	Ignore	0.006	2.46e-12
2244	13.385	Ignore	0.006	2.37e-12
2247	13.383	Ignore	0.008	2.29e-12
2250	13.385	Ignore	0.006	2.21e-12
2253	13.384	Ignore	0.007	2.13e-12

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2256	13.385	Ignore	0.006	2.06e-12
2259	13.383	Ignore	0.008	1.98e-12
2262	13.383	Ignore	0.008	1.91e-12
2265	13.384	Ignore	0.007	1.85e-12
2268	13.384	Ignore	0.007	1.78e-12
2271	13.384	Ignore	0.007	1.72e-12
2274	13.385	Ignore	0.006	1.66e-12
2277	13.383	Ignore	0.008	1.60e-12
2280	13.385	Ignore	0.006	1.55e-12
2283	13.385	Ignore	0.006	1.49e-12
2286	13.383	Ignore	0.008	1.44e-12
2289	13.383	Ignore	0.008	1.39e-12
2292	13.383	Ignore	0.008	1.34e-12
2295	13.383	Ignore	0.008	1.29e-12
2298	13.383	Ignore	0.008	1.25e-12
2301	13.383	Ignore	0.008	1.20e-12
2304	13.383	Ignore	0.008	1.16e-12
2307	13.383	Ignore	0.008	1.12e-12
2310	13.383	Ignore	0.008	1.08e-12
2313	13.385	Ignore	0.006	1.04e-12
2316	13.383	Ignore	0.008	1.01e-12
2319	13.385	Ignore	0.006	9.72e-13
2322	13.381	Ignore	0.01	9.38e-13
2325	13.383	Ignore	0.008	9.05e-13
2328	13.381	Ignore	0.01	8.73e-13
2331	13.385	Ignore	0.006	8.42e-13
2334	13.381	Ignore	0.01	8.13e-13
2337	13.381	Ignore	0.01	7.84e-13
2340	13.385	Ignore	0.006	7.57e-13
2343	13.381	Ignore	0.01	7.30e-13
2346	13.384	Ignore	0.007	7.05e-13
2349	13.383	Ignore	0.008	6.80e-13
2352	13.383	Ignore	0.008	6.56e-13
2355	13.381	Ignore	0.01	6.33e-13
2358	13.383	Ignore	0.008	6.11e-13
2361	13.384	Ignore	0.007	5.90e-13
2364	13.383	Ignore	0.008	5.69e-13
2367	13.384	Ignore	0.007	5.49e-13
2370	13.383	Ignore	0.008	5.30e-13
2373	13.381	Ignore	0.01	5.11e-13
2376	13.384	Ignore	0.007	4.93e-13
2379	13.382	Ignore	0.009	4.76e-13
2382	13.382	Ignore	0.009	4.59e-13
2385	13.384	Ignore	0.007	4.43e-13
2388	13.384	Ignore	0.007	4.28e-13
2391	13.382	Ignore	0.009	4.13e-13
2394	13.382	Ignore	0.009	3.98e-13
2397	13.384	Ignore	0.007	3.84e-13
2400	13.382	Ignore	0.009	3.71e-13
2403	13.382	Ignore	0.009	3.58e-13
2406	13.384	Ignore	0.007	3.45e-13
2409	13.384	Ignore	0.007	3.33e-13
2412	13.382	Ignore	0.009	3.21e-13
2415	13.38	Ignore	0.011	3.10e-13

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2418	13.384	Ignore	0.007	2.99e-13
2421	13.384	Ignore	0.007	2.89e-13
2424	13.382	Ignore	0.009	2.79e-13
2427	13.384	Ignore	0.007	2.69e-13
2430	13.384	Ignore	0.007	2.60e-13
2433	13.382	Ignore	0.009	2.50e-13
2436	13.38	Ignore	0.011	2.42e-13
2439	13.382	Ignore	0.009	2.33e-13
2442	13.382	Ignore	0.009	2.25e-13
2445	13.382	Ignore	0.009	2.17e-13
2448	13.382	Ignore	0.009	2.09e-13
2451	13.382	Ignore	0.009	2.02e-13
2454	13.382	Ignore	0.009	1.95e-13
2457	13.38	Ignore	0.011	1.88e-13
2460	13.382	Ignore	0.009	1.82e-13
2463	13.382	Ignore	0.009	1.75e-13
2466	13.382	Ignore	0.009	1.69e-13
2469	13.382	Ignore	0.009	1.63e-13
2472	13.382	Ignore	0.009	1.57e-13
2475	13.382	Ignore	0.009	1.52e-13
2478	13.384	Ignore	0.007	1.47e-13
2481	13.38	Ignore	0.011	1.41e-13
2484	13.38	Ignore	0.011	1.37e-13
2487	13.384	Ignore	0.007	1.32e-13
2490	13.382	Ignore	0.009	1.27e-13
2493	13.38	Ignore	0.011	1.23e-13
2496	13.384	Ignore	0.007	1.18e-13
2499	13.38	Ignore	0.011	1.14e-13
2502	13.382	Ignore	0.009	1.10e-13
2505	13.38	Ignore	0.011	1.06e-13
2508	13.382	Ignore	0.009	1.03e-13
2511	13.382	Ignore	0.009	9.90e-14
2514	13.382	Ignore	0.009	9.56e-14
2517	13.384	Ignore	0.007	9.22e-14
2520	13.382	Ignore	0.009	8.90e-14
2523	13.384	Ignore	0.007	8.59e-14
2526	13.382	Ignore	0.009	8.28e-14
2529	13.382	Ignore	0.009	7.99e-14
2532	13.382	Ignore	0.009	7.71e-14
2535	13.382	Ignore	0.009	7.44e-14
2538	13.382	Ignore	0.009	7.18e-14
2541	13.384	Ignore	0.007	6.93e-14
2544	13.384	Ignore	0.007	6.69e-14
2547	13.384	Ignore	0.007	6.45e-14
2550	13.384	Ignore	0.007	6.23e-14
2553	13.384	Ignore	0.007	6.01e-14
2556	13.384	Ignore	0.007	5.80e-14
2559	13.384	Ignore	0.007	5.60e-14
2562	13.382	Ignore	0.009	5.40e-14
2565	13.382	Ignore	0.009	5.21e-14
2568	13.384	Ignore	0.007	5.03e-14
2571	13.382	Ignore	0.009	4.85e-14
2574	13.382	Ignore	0.009	4.68e-14
2577	13.382	Ignore	0.009	4.52e-14

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2580	13.384	Ignore	0.007	4.36e-14
2583	13.382	Ignore	0.009	4.21e-14
2586	13.384	Ignore	0.007	4.06e-14
2589	13.382	Ignore	0.009	3.92e-14
2592	13.382	Ignore	0.009	3.78e-14
2595	13.384	Ignore	0.007	3.65e-14
2598	13.382	Ignore	0.009	3.52e-14
2601	13.382	Ignore	0.009	3.40e-14
2604	13.382	Ignore	0.009	3.28e-14
2607	13.382	Ignore	0.009	3.16e-14
2610	13.382	Ignore	0.009	3.05e-14
2613	13.382	Ignore	0.009	2.94e-14
2616	13.384	Ignore	0.007	2.84e-14
2619	13.382	Ignore	0.009	2.74e-14
2622	13.384	Ignore	0.007	2.64e-14
2625	13.382	Ignore	0.009	2.55e-14
2628	13.384	Ignore	0.007	2.46e-14
2631	13.384	Ignore	0.007	2.38e-14
2634	13.382	Ignore	0.009	2.29e-14
2637	13.384	Ignore	0.007	2.21e-14
2640	13.382	Ignore	0.009	2.14e-14
2643	13.384	Ignore	0.007	2.06e-14
2646	13.384	Ignore	0.007	1.99e-14
2649	13.384	Ignore	0.007	1.92e-14
2652	13.382	Ignore	0.009	1.85e-14
2655	13.384	Ignore	0.007	1.79e-14
2658	13.384	Ignore	0.007	1.72e-14
2661	13.382	Ignore	0.009	1.66e-14
2664	13.384	Ignore	0.007	1.61e-14
2667	13.382	Ignore	0.009	1.55e-14
2670	13.384	Ignore	0.007	1.49e-14
2673	13.382	Ignore	0.009	1.44e-14
2676	13.383	Ignore	0.008	1.39e-14
2679	13.383	Ignore	0.008	1.34e-14
2682	13.383	Ignore	0.008	1.30e-14
2685	13.383	Ignore	0.008	1.25e-14
2688	13.384	Ignore	0.007	1.21e-14
2691	13.383	Ignore	0.008	1.16e-14
2694	13.383	Ignore	0.008	1.12e-14
2697	13.383	Ignore	0.008	1.08e-14
2700	13.384	Ignore	0.007	1.05e-14
2703	13.384	Ignore	0.007	1.01e-14
2706	13.383	Ignore	0.008	9.74e-15
2709	13.385	Ignore	0.006	9.40e-15
2712	13.385	Ignore	0.006	9.07e-15
2715	13.383	Ignore	0.008	8.75e-15
2718	13.381	Ignore	0.01	8.44e-15
2721	13.383	Ignore	0.008	8.15e-15
2724	13.381	Ignore	0.01	7.86e-15
2727	13.383	Ignore	0.008	7.59e-15
2730	13.383	Ignore	0.008	7.32e-15
2733	13.383	Ignore	0.008	7.06e-15
2736	13.382	Ignore	0.009	6.82e-15
2739	13.383	Ignore	0.008	6.58e-15

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2742	13.383	Ignore	0.008	6.35e-15
2745	13.382	Ignore	0.009	6.12e-15
2748	13.382	Ignore	0.009	5.91e-15
2751	13.383	Ignore	0.008	5.70e-15
2754	13.383	Ignore	0.008	5.50e-15
2757	13.382	Ignore	0.009	5.31e-15
2760	13.383	Ignore	0.008	5.12e-15
2763	13.383	Ignore	0.008	4.94e-15
2766	13.384	Ignore	0.007	4.77e-15
2769	13.384	Ignore	0.007	4.60e-15
2772	13.384	Ignore	0.007	4.44e-15
2775	13.382	Ignore	0.009	4.29e-15
2778	13.384	Ignore	0.007	4.14e-15
2781	13.384	Ignore	0.007	3.99e-15
2784	13.384	Ignore	0.007	3.85e-15
2787	13.384	Ignore	0.007	3.72e-15
2790	13.384	Ignore	0.007	3.59e-15
2793	13.384	Ignore	0.007	3.46e-15
2796	13.382	Ignore	0.009	3.34e-15
2799	13.382	Ignore	0.009	3.22e-15
2802	13.384	Ignore	0.007	3.11e-15
2805	13.382	Ignore	0.009	0.00e+00
2808	13.384	Ignore	0.007	0.00e+00
2811	13.384	Ignore	0.007	0.00e+00
2814	13.384	Ignore	0.007	0.00e+00
2817	13.382	Ignore	0.009	0.00e+00
2820	13.382	Ignore	0.009	0.00e+00
2823	13.384	Ignore	0.007	0.00e+00
2826	13.386	Ignore	0.005	0.00e+00
2829	13.384	Ignore	0.007	0.00e+00
2832	13.384	Ignore	0.007	0.00e+00
2835	13.384	Ignore	0.007	0.00e+00
2838	13.382	Ignore	0.009	0.00e+00
2841	13.384	Ignore	0.007	0.00e+00
2844	13.384	Ignore	0.007	0.00e+00
2847	13.384	Ignore	0.007	0.00e+00
2850	13.382	Ignore	0.009	0.00e+00
2853	13.384	Ignore	0.007	0.00e+00
2856	13.384	Ignore	0.007	0.00e+00
2859	13.384	Ignore	0.007	0.00e+00
2862	13.383	Ignore	0.008	0.00e+00
2865	13.383	Ignore	0.008	0.00e+00
2868	13.383	Ignore	0.008	0.00e+00
2871	13.383	Ignore	0.008	0.00e+00
2874	13.381	Ignore	0.01	0.00e+00
2877	13.383	Ignore	0.008	0.00e+00
2880	13.383	Ignore	0.008	0.00e+00
2883	13.384	Ignore	0.007	0.00e+00
2886	13.383	Ignore	0.008	0.00e+00
2889	13.383	Ignore	0.008	0.00e+00
2892	13.383	Ignore	0.008	0.00e+00
2895	13.383	Ignore	0.008	0.00e+00
2898	13.384	Ignore	0.007	0.00e+00
2901	13.384	Ignore	0.007	0.00e+00

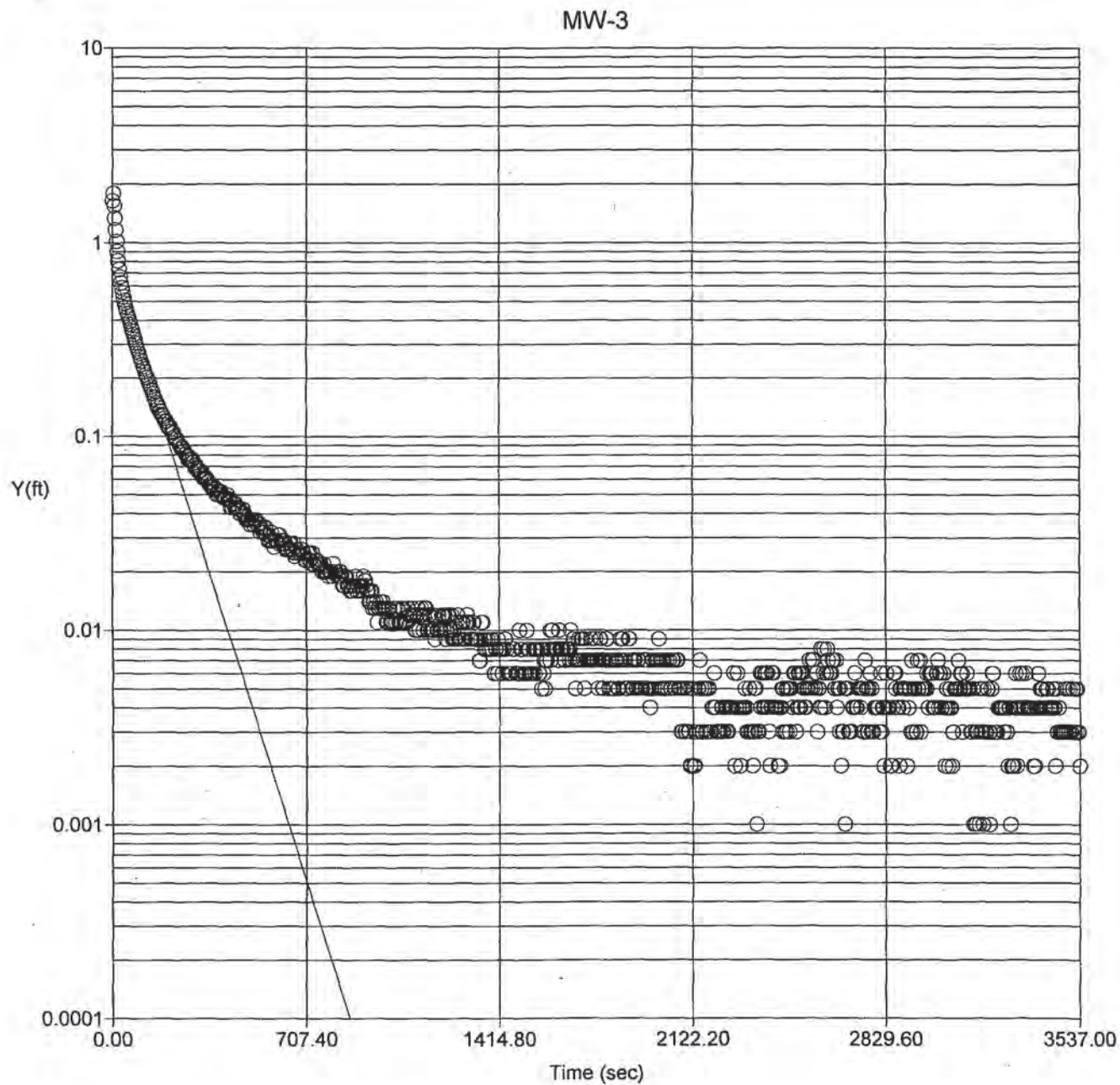
Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2904	13.384	Ignore	0.007	0.00e+00
2907	13.383	Ignore	0.008	0.00e+00
2910	13.383	Ignore	0.008	0.00e+00
2913	13.383	Ignore	0.008	0.00e+00
2916	13.383	Ignore	0.008	0.00e+00
2919	13.381	Ignore	0.01	0.00e+00
2922	13.383	Ignore	0.008	0.00e+00
2925	13.383	Ignore	0.008	0.00e+00
2928	13.383	Ignore	0.008	0.00e+00
2931	13.384	Ignore	0.007	0.00e+00
2934	13.385	Ignore	0.006	0.00e+00
2937	13.385	Ignore	0.006	0.00e+00
2940	13.381	Ignore	0.01	0.00e+00
2943	13.381	Ignore	0.01	0.00e+00
2946	13.383	Ignore	0.008	0.00e+00
2949	13.385	Ignore	0.006	0.00e+00
2952	13.383	Ignore	0.008	0.00e+00
2955	13.383	Ignore	0.008	0.00e+00
2958	13.385	Ignore	0.006	0.00e+00
2961	13.383	Ignore	0.008	0.00e+00
2964	13.381	Ignore	0.01	0.00e+00
2967	13.381	Ignore	0.01	0.00e+00
2970	13.383	Ignore	0.008	0.00e+00
2973	13.381	Ignore	0.01	0.00e+00
2976	13.383	Ignore	0.008	0.00e+00
2979	13.383	Ignore	0.008	0.00e+00
2982	13.381	Ignore	0.01	0.00e+00
2985	13.383	Ignore	0.008	0.00e+00
2988	13.381	Ignore	0.01	0.00e+00
2991	13.383	Ignore	0.008	0.00e+00
2994	13.383	Ignore	0.008	0.00e+00
2997	13.38	Ignore	0.011	0.00e+00
3000	13.383	Ignore	0.008	0.00e+00
3003	13.381	Ignore	0.01	0.00e+00
3006	13.381	Ignore	0.01	0.00e+00
3009	13.383	Ignore	0.008	0.00e+00
3012	13.383	Ignore	0.008	0.00e+00
3015	13.383	Ignore	0.008	0.00e+00
3018	13.383	Ignore	0.008	0.00e+00
3021	13.381	Ignore	0.01	0.00e+00
3024	13.382	Ignore	0.009	0.00e+00
3027	13.381	Ignore	0.01	0.00e+00
3030	13.383	Ignore	0.008	0.00e+00
3033	13.382	Ignore	0.009	0.00e+00
3036	13.382	Ignore	0.009	0.00e+00
3039	13.383	Ignore	0.008	0.00e+00
3042	13.385	Ignore	0.006	0.00e+00
3045	13.382	Ignore	0.009	0.00e+00
3048	13.383	Ignore	0.008	0.00e+00
3051	13.383	Ignore	0.008	0.00e+00
3054	13.382	Ignore	0.009	0.00e+00
3057	13.382	Ignore	0.009	0.00e+00
3060	13.382	Ignore	0.009	0.00e+00
3063	13.383	Ignore	0.008	0.00e+00

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
3066	13.382	Ignore	0.009	0.00e+00
3069	13.383	Ignore	0.008	0.00e+00
3072	13.383	Ignore	0.008	0.00e+00
3075	13.382	Ignore	0.009	0.00e+00
3078	13.382	Ignore	0.009	0.00e+00
3081	13.382	Ignore	0.009	0.00e+00
3084	13.382	Ignore	0.009	0.00e+00
3087	13.383	Ignore	0.008	0.00e+00
3090	13.382	Ignore	0.009	0.00e+00
3093	13.382	Ignore	0.009	0.00e+00
3096	13.383	Ignore	0.008	0.00e+00
3099	13.383	Ignore	0.008	0.00e+00
3102	13.382	Ignore	0.009	0.00e+00
3105	13.384	Ignore	0.007	0.00e+00
3108	13.384	Ignore	0.007	0.00e+00
3111	13.384	Ignore	0.007	0.00e+00
3114	13.384	Ignore	0.007	0.00e+00
3117	13.384	Ignore	0.007	0.00e+00
3120	13.382	Ignore	0.009	0.00e+00
3123	13.384	Ignore	0.007	0.00e+00
3126	13.384	Ignore	0.007	0.00e+00
3129	13.384	Ignore	0.007	0.00e+00
3132	13.382	Ignore	0.009	0.00e+00
3135	13.382	Ignore	0.009	0.00e+00
3138	13.382	Ignore	0.009	0.00e+00
3141	13.382	Ignore	0.009	0.00e+00
3144	13.382	Ignore	0.009	0.00e+00
3147	13.382	Ignore	0.009	0.00e+00
3150	13.382	Ignore	0.009	0.00e+00
3153	13.382	Ignore	0.009	0.00e+00
3156	13.384	Ignore	0.007	0.00e+00
3159	13.384	Ignore	0.007	0.00e+00
3162	13.382	Ignore	0.009	0.00e+00
3165	13.384	Ignore	0.007	0.00e+00
3168	13.384	Ignore	0.007	0.00e+00
3171	13.384	Ignore	0.007	0.00e+00
3174	13.382	Ignore	0.009	0.00e+00
3177	13.384	Ignore	0.007	0.00e+00
3180	13.382	Ignore	0.009	0.00e+00
3183	13.384	Ignore	0.007	0.00e+00
3186	13.382	Ignore	0.009	0.00e+00
3189	13.382	Ignore	0.009	0.00e+00
3192	13.384	Ignore	0.007	0.00e+00
3195	13.382	Ignore	0.009	0.00e+00
3198	13.382	Ignore	0.009	0.00e+00
3201	13.38	Ignore	0.011	0.00e+00
3204	13.384	Ignore	0.007	0.00e+00
3207	13.382	Ignore	0.009	0.00e+00
3210	13.382	Ignore	0.009	0.00e+00
3213	13.384	Ignore	0.007	0.00e+00
3216	13.38	Ignore	0.011	0.00e+00
3219	13.382	Ignore	0.009	0.00e+00
3222	13.382	Ignore	0.009	0.00e+00
3225	13.384	Ignore	0.007	0.00e+00

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
3228	13.38	Ignore	0.011	0.00e+00
3231	13.384	Ignore	0.007	0.00e+00
3234	13.38	Ignore	0.011	0.00e+00
3237	13.382	Ignore	0.009	0.00e+00
3240	13.382	Ignore	0.009	0.00e+00
3243	13.382	Ignore	0.009	0.00e+00
3246	13.381	Ignore	0.01	0.00e+00
3249	13.381	Ignore	0.01	0.00e+00
3252	13.382	Ignore	0.009	0.00e+00
3255	13.382	Ignore	0.009	0.00e+00
3258	13.382	Ignore	0.009	0.00e+00
3261	13.381	Ignore	0.01	0.00e+00
3264	13.382	Ignore	0.009	0.00e+00
3267	13.382	Ignore	0.009	0.00e+00
3270	13.382	Ignore	0.009	0.00e+00
3273	13.382	Ignore	0.009	0.00e+00
3276	13.392	Ignore	-0.001	0.00e+00
3279	13.382	Ignore	0.009	0.00e+00
3282	13.382	Ignore	0.009	0.00e+00
3285	13.382	Ignore	0.009	0.00e+00
3288	13.384	Ignore	0.007	0.00e+00
3291	13.384	Ignore	0.007	0.00e+00
3294	13.382	Ignore	0.009	0.00e+00
3297	13.382	Ignore	0.009	0.00e+00
3300	13.381	Ignore	0.01	0.00e+00
3303	13.383	Ignore	0.008	0.00e+00
3306	13.383	Ignore	0.008	0.00e+00
3309	13.382	Ignore	0.009	0.00e+00
3312	13.383	Ignore	0.008	0.00e+00
3315	13.383	Ignore	0.008	0.00e+00
3318	13.384	Ignore	0.007	0.00e+00
3321	13.383	Ignore	0.008	0.00e+00
3324	13.383	Ignore	0.008	0.00e+00
3327	13.381	Ignore	0.01	0.00e+00
3330	13.383	Ignore	0.008	0.00e+00
3333	13.383	Ignore	0.008	0.00e+00
3336	13.383	Ignore	0.008	0.00e+00
3339	13.383	Ignore	0.008	0.00e+00
3342	13.381	Ignore	0.01	0.00e+00
3345	13.383	Ignore	0.008	0.00e+00
3348	13.381	Ignore	0.01	0.00e+00
3351	13.383	Ignore	0.008	0.00e+00
3354	13.383	Ignore	0.008	0.00e+00
3357	13.383	Ignore	0.008	0.00e+00
3360	13.383	Ignore	0.008	0.00e+00
3363	13.383	Ignore	0.008	0.00e+00
3366	13.383	Ignore	0.008	0.00e+00
3369	13.384	Ignore	0.007	0.00e+00
3372	13.383	Ignore	0.008	0.00e+00
3375	13.384	Ignore	0.007	0.00e+00
3378	13.383	Ignore	0.008	0.00e+00
3381	13.384	Ignore	0.007	0.00e+00
3384	13.383	Ignore	0.008	0.00e+00
3387	13.381	Ignore	0.01	0.00e+00

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
3390	13.384	Ignore	0.007	0.00e+00
3393	13.381	Ignore	0.01	0.00e+00
3396	13.383	Ignore	0.008	0.00e+00
3399	13.381	Ignore	0.01	0.00e+00
3402	13.383	Ignore	0.008	0.00e+00
3405	13.383	Ignore	0.008	0.00e+00
3408	13.383	Ignore	0.008	0.00e+00
3411	13.381	Ignore	0.01	0.00e+00
3414	13.383	Ignore	0.008	0.00e+00
3417	13.384	Ignore	0.007	0.00e+00
3420	13.381	Ignore	0.01	0.00e+00
3423	13.383	Ignore	0.008	0.00e+00
3426	13.383	Ignore	0.008	0.00e+00
3429	13.383	Ignore	0.008	0.00e+00
3432	13.383	Ignore	0.008	0.00e+00
3435	13.381	Ignore	0.01	0.00e+00
3438	13.381	Ignore	0.01	0.00e+00
3441	13.381	Ignore	0.01	0.00e+00
3444	13.381	Ignore	0.01	0.00e+00
3447	13.381	Ignore	0.01	0.00e+00
3450	13.383	Ignore	0.008	0.00e+00
3453	13.383	Ignore	0.008	0.00e+00
3456	13.383	Ignore	0.008	0.00e+00
3459	13.383	Ignore	0.008	0.00e+00
3462	13.383	Ignore	0.008	0.00e+00
3465	13.383	Ignore	0.008	0.00e+00
3468	13.383	Ignore	0.008	0.00e+00
3471	13.384	Ignore	0.007	0.00e+00
3474	13.383	Ignore	0.008	0.00e+00
3477	13.383	Ignore	0.008	0.00e+00
3480	13.385	Ignore	0.006	0.00e+00
3483	13.385	Ignore	0.006	0.00e+00
3486	13.381	Ignore	0.01	0.00e+00
3489	13.383	Ignore	0.008	0.00e+00
3492	13.381	Ignore	0.01	0.00e+00
3495	13.385	Ignore	0.006	0.00e+00
3498	13.381	Ignore	0.01	0.00e+00
3501	13.383	Ignore	0.008	0.00e+00
3504	13.383	Ignore	0.008	0.00e+00
3507	13.383	Ignore	0.008	0.00e+00
3510	13.383	Ignore	0.008	0.00e+00
3513	13.381	Ignore	0.01	0.00e+00
3516	13.381	Ignore	0.01	0.00e+00
3519	13.383	Ignore	0.008	0.00e+00
3522	13.385	Ignore	0.006	0.00e+00
3525	13.385	Ignore	0.006	0.00e+00
3528	13.381	Ignore	0.01	0.00e+00
3531	13.383	Ignore	0.008	0.00e+00
3534	13.383	Ignore	0.008	0.00e+00
3537	13.385	Ignore	0.006	0.00e+00
3540	13.383	Ignore	0.008	0.00e+00
3543	13.383	Ignore	0.008	0.00e+00
3546	13.383	Ignore	0.008	0.00e+00
3549	13.383	Ignore	0.008	0.00e+00

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
3552	13.385	Ignore	0.006	0.00e+00
3555	13.385	Ignore	0.006	0.00e+00
3558	13.383	Ignore	0.008	0.00e+00
3561	13.383	Ignore	0.008	0.00e+00
3564	13.383	Ignore	0.008	0.00e+00
3567	13.383	Ignore	0.008	0.00e+00
3570	13.383	Ignore	0.008	0.00e+00
3573	13.383	Ignore	0.008	0.00e+00
3576	13.383	Ignore	0.008	0.00e+00
3579	13.381	Ignore	0.01	0.00e+00
3582	13.383	Ignore	0.008	0.00e+00
3585	13.381	Ignore	0.01	0.00e+00
3588	13.381	Ignore	0.01	0.00e+00
3591	13.383	Ignore	0.008	0.00e+00
3594	13.381	Ignore	0.01	0.00e+00
3597	13.381	Ignore	0.01	0.00e+00
3600	13.383	Ignore	0.008	0.00e+00
3603	13.383	Ignore	0.008	0.00e+00
3606	13.383	Ignore	0.008	0.00e+00
3609	13.383	Ignore	0.008	0.00e+00
3612	13.383	Ignore	0.008	0.00e+00
3615	13.383	Ignore	0.008	0.00e+00
3618	13.383	Ignore	0.008	0.00e+00
3621	13.381	Ignore	0.01	0.00e+00
3624	13.381	Ignore	0.01	0.00e+00
3627	13.383	Ignore	0.008	0.00e+00
3630	13.383	Ignore	0.008	0.00e+00
3633	13.383	Ignore	0.008	0.00e+00
3636	13.381	Ignore	0.01	0.00e+00
3639	13.383	Ignore	0.008	0.00e+00
3642	13.381	Ignore	0.01	0.00e+00
3645	13.381	Ignore	0.01	0.00e+00
3648	13.383	Ignore	0.008	0.00e+00
3651	13.381	Ignore	0.01	0.00e+00
3654	13.381	Ignore	0.01	0.00e+00
3657	13.381	Ignore	0.01	0.00e+00
3660	13.383	Ignore	0.008	0.00e+00
3663	13.381	Ignore	0.01	0.00e+00
3666	13.383	Ignore	0.008	0.00e+00
3669	13.383	Ignore	0.008	0.00e+00
3672	13.381	Ignore	0.01	0.00e+00
3675	13.38	Ignore	0.011	0.00e+00
3678	13.38	Ignore	0.011	0.00e+00
3681	13.383	Ignore	0.008	0.00e+00
3684	13.381	Ignore	0.01	0.00e+00
3687	13.381	Ignore	0.01	0.00e+00
3690	13.381	Ignore	0.01	0.00e+00
3693	13.381	Ignore	0.01	0.00e+00
3696	13.383	Ignore	0.008	0.00e+00
3699	13.383	Ignore	0.008	0.00e+00
3702	13.383	Ignore	0.008	0.00e+00



LUST No.:	Site Name: Sunshine Laundry		
Hydraulic Conductivity: 0.481 m/day	Well: MW-3	Slug Test Date: 01/28/2010	
Barker Lemar Engineering Consultants		CGWP: Leah Calvert, 2017	

BOUWER-RICE SLUG TEST ANALYSIS

SITE

Sunshine Laundry
2422 5th Avenue South
Fort Dodge, Iowa, 50501-5551

CLIENT

CONSULTANT

Barker Lemar Engineering Consultants
1801 Industrial Circle
West Des Moines, IA, 50265
Certified Groundwater Professional: Leah Calvert, 2017

SLUG TEST

Hydraulic Conductivity: 0.481 m/day

Monitoring Well: MW-3
Test Date: 01/28/2010
Field Testing by: Kris Sommer
Test Analysis by: Leah Calvert

WELL GEOMETRY

H: 29.1 ft
Lw: 14.55 ft
Le: 14.55 ft
dw: 7.25 in, rw: 3.63 in
dc: 2 in, rc: 1.0 in
Drained Filter Pack Porosity (%): 15
Effective Radius (re): 1.68 in
Slug Volume(L): 1

BOUWER-RICE COEFFICIENTS

Le/rw: 48.2
A: 2.89
B: 0.441
C: 2.57
Ln(Re/rw): 2.64

LEAST SQUARES BEST FIT

Ln(Y)-cm versus Time-sec
Slope: -1.03e-02
Intercept: 3.12

Slug Test Type: Rising head
Recovery Data Type: H: Groundwater Head
Static Water Level: 12.899 ft

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
0	11.258	Ignore	1.641	0.743
3	11.105	Ignore	1.794	0.721
6	11.351	Ignore	1.548	0.699
9	11.561	Ignore	1.338	0.677
12	11.737	Ignore	1.162	0.657
15	11.882	Ignore	1.017	0.637
18	11.998	Ignore	0.901	0.617
21	12.093	Ignore	0.806	0.599
24	12.173	Ignore	0.726	0.58
27	12.233	Ignore	0.666	0.563
30	12.279	Ignore	0.62	0.546
33	12.314	Ignore	0.585	0.529
36	12.344	Use	0.555	0.513
39	12.371	Use	0.528	0.497
42	12.394	Use	0.505	0.482
45	12.414	Use	0.485	0.468
48	12.434	Use	0.465	0.453
51	12.454	Use	0.445	0.44
54	12.469	Use	0.43	0.426
57	12.483	Use	0.416	0.413
60	12.495	Use	0.404	0.401
63	12.508	Use	0.391	0.388
66	12.522	Use	0.377	0.377
69	12.538	Use	0.361	0.365
72	12.55	Use	0.349	0.354
75	12.563	Use	0.336	0.343
78	12.572	Use	0.327	0.333
81	12.583	Use	0.316	0.323
84	12.596	Use	0.303	0.313
87	12.605	Use	0.294	0.303
90	12.615	Use	0.284	0.294
93	12.623	Use	0.276	0.285
96	12.631	Use	0.268	0.277
99	12.641	Use	0.258	0.268
102	12.65	Use	0.249	0.26
105	12.655	Use	0.244	0.252
108	12.663	Use	0.236	0.244
111	12.669	Use	0.23	0.237
114	12.676	Use	0.223	0.23
117	12.683	Use	0.216	0.223
120	12.691	Use	0.208	0.216
123	12.696	Use	0.203	0.209
126	12.698	Use	0.201	0.203
129	12.704	Use	0.195	0.197
132	12.709	Use	0.19	0.191
135	12.713	Use	0.186	0.185
138	12.719	Use	0.18	0.179
141	12.724	Use	0.175	0.174
144	12.727	Use	0.172	0.169
147	12.732	Use	0.167	0.164

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
150	12.739	Use	0.16	0.159
153	12.742	Use	0.157	0.154
156	12.745	Use	0.154	0.149
159	12.75	Use	0.149	0.145
162	12.757	Use	0.142	0.14
165	12.754	Use	0.145	0.136
168	12.759	Use	0.14	0.132
171	12.764	Ignore	0.135	0.128
174	12.765	Ignore	0.134	0.124
177	12.769	Ignore	0.13	0.12
180	12.77	Ignore	0.129	0.116
183	12.772	Ignore	0.127	0.113
186	12.775	Ignore	0.124	0.109
189	12.779	Ignore	0.12	0.106
192	12.78	Ignore	0.119	0.103
195	12.78	Ignore	0.119	0.0997
198	12.785	Ignore	0.114	0.0967
201	12.787	Ignore	0.112	0.0938
204	12.788	Ignore	0.111	0.0909
207	12.787	Ignore	0.112	0.0881
210	12.79	Ignore	0.109	0.0855
213	12.793	Ignore	0.106	0.0829
216	12.793	Ignore	0.106	0.0803
219	12.795	Ignore	0.104	0.0779
222	12.795	Ignore	0.104	0.0755
225	12.8	Ignore	0.099	0.0732
228	12.802	Ignore	0.097	0.071
231	12.803	Ignore	0.096	0.0688
234	12.802	Ignore	0.097	0.0667
237	12.805	Ignore	0.094	0.0647
240	12.808	Ignore	0.091	0.0627
243	12.808	Ignore	0.091	0.0608
246	12.81	Ignore	0.089	0.059
249	12.813	Ignore	0.086	0.0572
252	12.811	Ignore	0.088	0.0555
255	12.813	Ignore	0.086	0.0538
258	12.815	Ignore	0.084	0.0521
261	12.815	Ignore	0.084	0.0505
264	12.818	Ignore	0.081	0.049
267	12.818	Ignore	0.081	0.0475
270	12.82	Ignore	0.079	0.0461
273	12.823	Ignore	0.076	0.0447
276	12.82	Ignore	0.079	0.0433
279	12.823	Ignore	0.076	0.042
282	12.823	Ignore	0.076	0.0407
285	12.825	Ignore	0.074	0.0395
288	12.823	Ignore	0.076	0.0383
291	12.823	Ignore	0.076	0.0371
294	12.826	Ignore	0.073	0.036
297	12.828	Ignore	0.071	0.0349
300	12.83	Ignore	0.069	0.0338
303	12.828	Ignore	0.071	0.0328
306	12.831	Ignore	0.068	0.0318
309	12.831	Ignore	0.068	0.0308

Time (sec)	Recovery: H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
312	12.833	Ignore	0.066	0.0299
315	12.833	Ignore	0.066	0.029
318	12.833	Ignore	0.066	0.0281
321	12.833	Ignore	0.066	0.0272
324	12.836	Ignore	0.063	0.0264
327	12.834	Ignore	0.065	0.0256
330	12.838	Ignore	0.061	0.0248
333	12.836	Ignore	0.063	0.0241
336	12.838	Ignore	0.061	0.0233
339	12.838	Ignore	0.061	0.0226
342	12.838	Ignore	0.061	0.0219
345	12.839	Ignore	0.06	0.0213
348	12.841	Ignore	0.058	0.0206
351	12.841	Ignore	0.058	0.02
354	12.843	Ignore	0.056	0.0194
357	12.843	Ignore	0.056	0.0188
360	12.844	Ignore	0.055	0.0182
363	12.844	Ignore	0.055	0.0177
366	12.846	Ignore	0.053	0.0171
369	12.844	Ignore	0.055	0.0166
372	12.846	Ignore	0.053	0.0161
375	12.846	Ignore	0.053	0.0156
378	12.849	Ignore	0.05	0.0151
381	12.847	Ignore	0.052	0.0147
384	12.849	Ignore	0.05	0.0142
387	12.847	Ignore	0.052	0.0138
390	12.847	Ignore	0.052	0.0134
393	12.849	Ignore	0.05	0.013
396	12.847	Ignore	0.052	0.0126
399	12.849	Ignore	0.05	0.0122
402	12.849	Ignore	0.05	0.0118
405	12.851	Ignore	0.048	0.0115
408	12.851	Ignore	0.048	0.0111
411	12.851	Ignore	0.048	0.0108
414	12.851	Ignore	0.048	0.0105
417	12.849	Ignore	0.05	0.0101
420	12.851	Ignore	0.048	0.00983
423	12.852	Ignore	0.047	0.00953
426	12.852	Ignore	0.047	0.00924
429	12.856	Ignore	0.043	0.00896
432	12.852	Ignore	0.047	0.00869
435	12.856	Ignore	0.043	0.00842
438	12.854	Ignore	0.045	0.00817
441	12.854	Ignore	0.045	0.00792
444	12.856	Ignore	0.043	0.00768
447	12.854	Ignore	0.045	0.00744
450	12.856	Ignore	0.043	0.00722
453	12.856	Ignore	0.043	0.007
456	12.856	Ignore	0.043	0.00678
459	12.857	Ignore	0.042	0.00658
462	12.857	Ignore	0.042	0.00638
465	12.859	Ignore	0.04	0.00618
468	12.859	Ignore	0.04	0.00599
471	12.857	Ignore	0.042	0.00581

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
474	12.857	Ignore	0.042	0.00564
477	12.859	Ignore	0.04	0.00546
480	12.86	Ignore	0.039	0.0053
483	12.86	Ignore	0.039	0.00514
486	12.862	Ignore	0.037	0.00498
489	12.862	Ignore	0.037	0.00483
492	12.862	Ignore	0.037	0.00468
495	12.862	Ignore	0.037	0.00454
498	12.862	Ignore	0.037	0.0044
501	12.864	Ignore	0.035	0.00427
504	12.862	Ignore	0.037	0.00414
507	12.862	Ignore	0.037	0.00401
510	12.862	Ignore	0.037	0.00389
513	12.864	Ignore	0.035	0.00377
516	12.862	Ignore	0.037	0.00366
519	12.862	Ignore	0.037	0.00355
522	12.862	Ignore	0.037	0.00344
525	12.862	Ignore	0.037	0.00333
528	12.864	Ignore	0.035	0.00323
531	12.865	Ignore	0.034	0.00313
534	12.863	Ignore	0.036	0.00304
537	12.867	Ignore	0.032	0.00295
540	12.865	Ignore	0.034	0.00286
543	12.865	Ignore	0.034	0.00277
546	12.867	Ignore	0.032	0.00268
549	12.867	Ignore	0.032	0.0026
552	12.865	Ignore	0.034	0.00252
555	12.867	Ignore	0.032	0.00245
558	12.865	Ignore	0.034	0.00237
561	12.868	Ignore	0.031	0.0023
564	12.868	Ignore	0.031	0.00223
567	12.87	Ignore	0.029	0.00216
570	12.868	Ignore	0.031	0.0021
573	12.87	Ignore	0.029	0.00203
576	12.87	Ignore	0.029	0.00197
579	12.867	Ignore	0.032	0.00191
582	12.87	Ignore	0.029	0.00185
585	12.87	Ignore	0.029	0.0018
588	12.872	Ignore	0.027	0.00174
591	12.87	Ignore	0.029	0.00169
594	12.87	Ignore	0.029	0.00164
597	12.87	Ignore	0.029	0.00159
600	12.87	Ignore	0.029	0.00154
603	12.868	Ignore	0.031	0.00149
606	12.871	Ignore	0.028	0.00145
609	12.868	Ignore	0.031	0.0014
612	12.87	Ignore	0.029	0.00136
615	12.87	Ignore	0.029	0.00132
618	12.871	Ignore	0.028	0.00128
621	12.871	Ignore	0.028	0.00124
624	12.87	Ignore	0.029	0.0012
627	12.871	Ignore	0.028	0.00117
630	12.871	Ignore	0.028	0.00113
633	12.873	Ignore	0.026	0.0011

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
636	12.873	Ignore	0.026	0.00106
639	12.873	Ignore	0.026	0.00103
642	12.873	Ignore	0.026	9.99e-04
645	12.871	Ignore	0.028	9.68e-04
648	12.873	Ignore	0.026	9.39e-04
651	12.871	Ignore	0.028	9.10e-04
654	12.873	Ignore	0.026	8.83e-04
657	12.873	Ignore	0.026	8.56e-04
660	12.871	Ignore	0.028	8.30e-04
663	12.874	Ignore	0.025	8.05e-04
666	12.875	Ignore	0.024	7.80e-04
669	12.874	Ignore	0.025	7.56e-04
672	12.873	Ignore	0.026	7.33e-04
675	12.873	Ignore	0.026	7.11e-04
678	12.874	Ignore	0.025	6.89e-04
681	12.874	Ignore	0.025	6.68e-04
684	12.874	Ignore	0.025	6.48e-04
687	12.874	Ignore	0.025	6.28e-04
690	12.873	Ignore	0.026	6.09e-04
693	12.873	Ignore	0.026	5.91e-04
696	12.874	Ignore	0.025	5.73e-04
699	12.874	Ignore	0.025	5.55e-04
702	12.876	Ignore	0.023	5.38e-04
705	12.876	Ignore	0.023	5.22e-04
708	12.876	Ignore	0.023	5.06e-04
711	12.874	Ignore	0.025	4.91e-04
714	12.874	Ignore	0.025	4.76e-04
717	12.876	Ignore	0.023	4.61e-04
720	12.874	Ignore	0.025	4.47e-04
723	12.876	Ignore	0.023	4.34e-04
726	12.877	Ignore	0.022	4.21e-04
729	12.874	Ignore	0.025	4.08e-04
732	12.877	Ignore	0.022	3.95e-04
735	12.877	Ignore	0.022	3.83e-04
738	12.877	Ignore	0.022	3.72e-04
741	12.876	Ignore	0.023	3.60e-04
744	12.876	Ignore	0.023	3.49e-04
747	12.876	Ignore	0.023	3.39e-04
750	12.877	Ignore	0.022	3.28e-04
753	12.877	Ignore	0.022	3.18e-04
756	12.877	Ignore	0.022	3.09e-04
759	12.877	Ignore	0.022	2.99e-04
762	12.877	Ignore	0.022	2.90e-04
765	12.879	Ignore	0.02	2.81e-04
768	12.879	Ignore	0.02	2.73e-04
771	12.877	Ignore	0.022	2.65e-04
774	12.879	Ignore	0.02	2.56e-04
777	12.879	Ignore	0.02	2.49e-04
780	12.879	Ignore	0.02	2.41e-04
783	12.879	Ignore	0.02	2.34e-04
786	12.879	Ignore	0.02	2.27e-04
789	12.88	Ignore	0.019	2.20e-04
792	12.879	Ignore	0.02	2.13e-04
795	12.879	Ignore	0.02	2.07e-04

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
798	12.879	Ignore	0.02	2.00e-04
801	12.879	Ignore	0.02	1.94e-04
804	12.88	Ignore	0.019	1.88e-04
807	12.877	Ignore	0.022	1.83e-04
810	12.879	Ignore	0.02	1.77e-04
813	12.879	Ignore	0.02	1.72e-04
816	12.879	Ignore	0.02	1.66e-04
819	12.879	Ignore	0.02	1.61e-04
822	12.88	Ignore	0.019	1.56e-04
825	12.88	Ignore	0.019	1.52e-04
828	12.879	Ignore	0.02	1.47e-04
831	12.88	Ignore	0.019	1.43e-04
834	12.879	Ignore	0.02	1.38e-04
837	12.88	Ignore	0.019	1.34e-04
840	12.882	Ignore	0.017	1.30e-04
843	12.882	Ignore	0.017	1.26e-04
846	12.882	Ignore	0.017	1.22e-04
849	12.88	Ignore	0.019	1.18e-04
852	12.88	Ignore	0.019	1.15e-04
855	12.88	Ignore	0.019	1.11e-04
858	12.882	Ignore	0.017	1.08e-04
861	12.882	Ignore	0.017	1.05e-04
864	12.882	Ignore	0.017	1.02e-04
867	12.883	Ignore	0.016	9.84e-05
870	12.882	Ignore	0.017	9.54e-05
873	12.883	Ignore	0.016	9.25e-05
876	12.883	Ignore	0.016	8.97e-05
879	12.882	Ignore	0.017	8.70e-05
882	12.882	Ignore	0.017	8.43e-05
885	12.882	Ignore	0.017	8.18e-05
888	12.88	Ignore	0.019	7.93e-05
891	12.883	Ignore	0.016	7.69e-05
894	12.883	Ignore	0.016	7.45e-05
897	12.882	Ignore	0.017	7.23e-05
900	12.882	Ignore	0.017	7.01e-05
903	12.883	Ignore	0.016	6.79e-05
906	12.882	Ignore	0.017	6.59e-05
909	12.882	Ignore	0.017	6.39e-05
912	12.883	Ignore	0.016	6.19e-05
915	12.882	Ignore	0.017	6.00e-05
918	12.88	Ignore	0.019	5.82e-05
921	12.881	Ignore	0.018	5.64e-05
924	12.881	Ignore	0.018	5.47e-05
927	12.882	Ignore	0.017	5.31e-05
930	12.883	Ignore	0.016	5.14e-05
933	12.883	Ignore	0.016	4.99e-05
936	12.883	Ignore	0.016	4.84e-05
939	12.885	Ignore	0.014	4.69e-05
942	12.883	Ignore	0.016	4.55e-05
945	12.885	Ignore	0.014	4.41e-05
948	12.883	Ignore	0.016	4.27e-05
951	12.886	Ignore	0.013	4.14e-05
954	12.885	Ignore	0.014	4.02e-05
957	12.885	Ignore	0.014	3.90e-05

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
960	12.886	Ignore	0.013	3.78e-05
963	12.886	Ignore	0.013	3.66e-05
966	12.885	Ignore	0.014	3.55e-05
969	12.888	Ignore	0.011	3.44e-05
972	12.886	Ignore	0.013	3.34e-05
975	12.886	Ignore	0.013	3.24e-05
978	12.886	Ignore	0.013	3.14e-05
981	12.885	Ignore	0.014	3.04e-05
984	12.886	Ignore	0.013	2.95e-05
987	12.886	Ignore	0.013	2.86e-05
990	12.885	Ignore	0.014	2.77e-05
993	12.886	Ignore	0.013	2.69e-05
996	12.886	Ignore	0.013	2.61e-05
999	12.886	Ignore	0.013	2.53e-05
1002	12.888	Ignore	0.011	2.45e-05
1005	12.886	Ignore	0.013	2.38e-05
1008	12.888	Ignore	0.011	2.30e-05
1011	12.886	Ignore	0.013	2.23e-05
1014	12.886	Ignore	0.013	2.17e-05
1017	12.888	Ignore	0.011	2.10e-05
1020	12.888	Ignore	0.011	2.04e-05
1023	12.888	Ignore	0.011	1.97e-05
1026	12.888	Ignore	0.011	1.91e-05
1029	12.886	Ignore	0.013	1.86e-05
1032	12.888	Ignore	0.011	1.80e-05
1035	12.886	Ignore	0.013	1.74e-05
1038	12.888	Ignore	0.011	1.69e-05
1041	12.886	Ignore	0.013	1.64e-05
1044	12.886	Ignore	0.013	1.59e-05
1047	12.888	Ignore	0.011	1.54e-05
1050	12.888	Ignore	0.011	1.49e-05
1053	12.888	Ignore	0.011	1.45e-05
1056	12.886	Ignore	0.013	1.41e-05
1059	12.888	Ignore	0.011	1.36e-05
1062	12.886	Ignore	0.013	1.32e-05
1065	12.886	Ignore	0.013	1.28e-05
1068	12.888	Ignore	0.011	1.24e-05
1071	12.888	Ignore	0.011	1.20e-05
1074	12.888	Ignore	0.011	1.17e-05
1077	12.888	Ignore	0.011	1.13e-05
1080	12.886	Ignore	0.013	1.10e-05
1083	12.886	Ignore	0.013	1.06e-05
1086	12.887	Ignore	0.012	1.03e-05
1089	12.887	Ignore	0.012	1.00e-05
1092	12.887	Ignore	0.012	9.70e-06
1095	12.886	Ignore	0.013	9.40e-06
1098	12.887	Ignore	0.012	9.12e-06
1101	12.887	Ignore	0.012	8.84e-06
1104	12.887	Ignore	0.012	8.57e-06
1107	12.889	Ignore	0.01	8.31e-06
1110	12.887	Ignore	0.012	8.06e-06
1113	12.889	Ignore	0.01	7.81e-06
1116	12.887	Ignore	0.012	7.57e-06
1119	12.886	Ignore	0.013	7.34e-06

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1122	12.889	Ignore	0.01	7.12e-06
1125	12.887	Ignore	0.012	6.90e-06
1128	12.887	Ignore	0.012	6.69e-06
1131	12.886	Ignore	0.013	6.49e-06
1134	12.887	Ignore	0.012	6.29e-06
1137	12.889	Ignore	0.01	6.10e-06
1140	12.887	Ignore	0.012	5.92e-06
1143	12.886	Ignore	0.013	5.74e-06
1146	12.886	Ignore	0.013	5.56e-06
1149	12.886	Ignore	0.013	5.39e-06
1152	12.889	Ignore	0.01	5.23e-06
1155	12.889	Ignore	0.01	5.07e-06
1158	12.887	Ignore	0.012	4.91e-06
1161	12.887	Ignore	0.012	4.77e-06
1164	12.889	Ignore	0.01	4.62e-06
1167	12.889	Ignore	0.01	4.48e-06
1170	12.889	Ignore	0.01	4.34e-06
1173	12.887	Ignore	0.012	4.21e-06
1176	12.889	Ignore	0.01	4.08e-06
1179	12.89	Ignore	0.009	3.96e-06
1182	12.887	Ignore	0.012	3.84e-06
1185	12.887	Ignore	0.012	3.72e-06
1188	12.889	Ignore	0.01	3.61e-06
1191	12.889	Ignore	0.01	3.50e-06
1194	12.887	Ignore	0.012	3.39e-06
1197	12.889	Ignore	0.01	3.29e-06
1200	12.889	Ignore	0.01	3.19e-06
1203	12.889	Ignore	0.01	3.09e-06
1206	12.887	Ignore	0.012	3.00e-06
1209	12.887	Ignore	0.012	2.91e-06
1212	12.889	Ignore	0.01	2.82e-06
1215	12.887	Ignore	0.012	2.73e-06
1218	12.887	Ignore	0.012	2.65e-06
1221	12.89	Ignore	0.009	2.57e-06
1224	12.889	Ignore	0.01	2.49e-06
1227	12.887	Ignore	0.012	2.41e-06
1230	12.887	Ignore	0.012	2.34e-06
1233	12.887	Ignore	0.012	2.27e-06
1236	12.889	Ignore	0.01	2.20e-06
1239	12.889	Ignore	0.01	2.13e-06
1242	12.887	Ignore	0.012	2.07e-06
1245	12.89	Ignore	0.009	2.01e-06
1248	12.889	Ignore	0.01	1.95e-06
1251	12.89	Ignore	0.009	1.89e-06
1254	12.89	Ignore	0.009	1.83e-06
1257	12.89	Ignore	0.009	1.77e-06
1260	12.888	Ignore	0.011	1.72e-06
1263	12.887	Ignore	0.012	1.67e-06
1266	12.89	Ignore	0.009	1.62e-06
1269	12.89	Ignore	0.009	1.57e-06
1272	12.888	Ignore	0.011	1.52e-06
1275	12.89	Ignore	0.009	1.47e-06
1278	12.888	Ignore	0.011	1.43e-06
1281	12.89	Ignore	0.009	1.38e-06

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1284	12.888	Ignore	0.011	1.34e-06
1287	12.89	Ignore	0.009	1.30e-06
1290	12.89	Ignore	0.009	1.26e-06
1293	12.888	Ignore	0.011	1.22e-06
1296	12.888	Ignore	0.011	1.19e-06
1299	12.887	Ignore	0.012	1.15e-06
1302	12.888	Ignore	0.011	1.12e-06
1305	12.888	Ignore	0.011	1.08e-06
1308	12.89	Ignore	0.009	1.05e-06
1311	12.89	Ignore	0.009	1.02e-06
1314	12.89	Ignore	0.009	9.86e-07
1317	12.89	Ignore	0.009	9.56e-07
1320	12.888	Ignore	0.011	9.27e-07
1323	12.888	Ignore	0.011	8.98e-07
1326	12.89	Ignore	0.009	8.71e-07
1329	12.89	Ignore	0.009	8.45e-07
1332	12.89	Ignore	0.009	8.19e-07
1335	12.89	Ignore	0.009	7.94e-07
1338	12.89	Ignore	0.009	7.70e-07
1341	12.892	Ignore	0.007	7.46e-07
1344	12.892	Ignore	0.007	7.24e-07
1347	12.89	Ignore	0.009	7.02e-07
1350	12.888	Ignore	0.011	6.80e-07
1353	12.888	Ignore	0.011	6.60e-07
1356	12.888	Ignore	0.011	6.40e-07
1359	12.89	Ignore	0.009	6.20e-07
1362	12.891	Ignore	0.008	6.01e-07
1365	12.89	Ignore	0.009	5.83e-07
1368	12.891	Ignore	0.008	5.65e-07
1371	12.891	Ignore	0.008	5.48e-07
1374	12.89	Ignore	0.009	5.31e-07
1377	12.891	Ignore	0.008	5.15e-07
1380	12.891	Ignore	0.008	4.99e-07
1383	12.89	Ignore	0.009	4.84e-07
1386	12.891	Ignore	0.008	4.70e-07
1389	12.891	Ignore	0.008	4.55e-07
1392	12.89	Ignore	0.009	4.41e-07
1395	12.893	Ignore	0.006	4.28e-07
1398	12.893	Ignore	0.006	4.15e-07
1401	12.891	Ignore	0.008	4.02e-07
1404	12.891	Ignore	0.008	3.90e-07
1407	12.893	Ignore	0.006	3.78e-07
1410	12.89	Ignore	0.009	3.67e-07
1413	12.891	Ignore	0.008	3.56e-07
1416	12.891	Ignore	0.008	3.45e-07
1419	12.891	Ignore	0.008	3.34e-07
1422	12.891	Ignore	0.008	3.24e-07
1425	12.893	Ignore	0.006	3.14e-07
1428	12.891	Ignore	0.008	3.05e-07
1431	12.891	Ignore	0.008	2.95e-07
1434	12.89	Ignore	0.009	2.86e-07
1437	12.89	Ignore	0.009	2.78e-07
1440	12.891	Ignore	0.008	2.69e-07
1443	12.893	Ignore	0.006	2.61e-07

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1446	12.893	Ignore	0.006	2.53e-07
1449	12.893	Ignore	0.006	2.45e-07
1452	12.893	Ignore	0.006	2.38e-07
1455	12.893	Ignore	0.006	2.31e-07
1458	12.893	Ignore	0.006	2.24e-07
1461	12.891	Ignore	0.008	2.17e-07
1464	12.891	Ignore	0.008	2.10e-07
1467	12.891	Ignore	0.008	2.04e-07
1470	12.891	Ignore	0.008	1.98e-07
1473	12.893	Ignore	0.006	1.92e-07
1476	12.893	Ignore	0.006	1.86e-07
1479	12.893	Ignore	0.006	1.80e-07
1482	12.893	Ignore	0.006	1.75e-07
1485	12.893	Ignore	0.006	1.69e-07
1488	12.889	Ignore	0.01	1.64e-07
1491	12.891	Ignore	0.008	1.59e-07
1494	12.891	Ignore	0.008	1.54e-07
1497	12.891	Ignore	0.008	1.50e-07
1500	12.893	Ignore	0.006	1.45e-07
1503	12.893	Ignore	0.006	1.41e-07
1506	12.893	Ignore	0.006	1.36e-07
1509	12.893	Ignore	0.006	1.32e-07
1512	12.893	Ignore	0.006	1.28e-07
1515	12.889	Ignore	0.01	1.24e-07
1518	12.891	Ignore	0.008	1.21e-07
1521	12.893	Ignore	0.006	1.17e-07
1524	12.891	Ignore	0.008	1.13e-07
1527	12.893	Ignore	0.006	1.10e-07
1530	12.893	Ignore	0.006	1.07e-07
1533	12.893	Ignore	0.006	1.03e-07
1536	12.893	Ignore	0.006	1.00e-07
1539	12.891	Ignore	0.008	9.71e-08
1542	12.893	Ignore	0.006	9.42e-08
1545	12.891	Ignore	0.008	9.13e-08
1548	12.891	Ignore	0.008	8.85e-08
1551	12.891	Ignore	0.008	8.58e-08
1554	12.891	Ignore	0.008	8.32e-08
1557	12.893	Ignore	0.006	8.07e-08
1560	12.893	Ignore	0.006	7.82e-08
1563	12.891	Ignore	0.008	7.59e-08
1566	12.891	Ignore	0.008	7.35e-08
1569	12.894	Ignore	0.005	7.13e-08
1572	12.891	Ignore	0.008	6.91e-08
1575	12.893	Ignore	0.006	6.70e-08
1578	12.892	Ignore	0.007	6.50e-08
1581	12.894	Ignore	0.005	6.30e-08
1584	12.892	Ignore	0.007	6.11e-08
1587	12.892	Ignore	0.007	5.92e-08
1590	12.891	Ignore	0.008	5.74e-08
1593	12.891	Ignore	0.008	5.57e-08
1596	12.891	Ignore	0.008	5.40e-08
1599	12.892	Ignore	0.007	5.24e-08
1602	12.889	Ignore	0.01	5.08e-08
1605	12.891	Ignore	0.008	4.92e-08

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1608	12.889	Ignore	0.01	4.77e-08
1611	12.891	Ignore	0.008	4.63e-08
1614	12.891	Ignore	0.008	4.49e-08
1617	12.891	Ignore	0.008	4.35e-08
1620	12.891	Ignore	0.008	4.22e-08
1623	12.891	Ignore	0.008	4.09e-08
1626	12.891	Ignore	0.008	3.96e-08
1629	12.892	Ignore	0.007	3.84e-08
1632	12.889	Ignore	0.01	3.73e-08
1635	12.891	Ignore	0.008	3.61e-08
1638	12.891	Ignore	0.008	3.50e-08
1641	12.891	Ignore	0.008	3.40e-08
1644	12.891	Ignore	0.008	3.29e-08
1647	12.891	Ignore	0.008	3.19e-08
1650	12.892	Ignore	0.007	3.10e-08
1653	12.892	Ignore	0.007	3.00e-08
1656	12.891	Ignore	0.008	2.91e-08
1659	12.891	Ignore	0.008	2.82e-08
1662	12.891	Ignore	0.008	2.74e-08
1665	12.891	Ignore	0.008	2.65e-08
1668	12.892	Ignore	0.007	2.57e-08
1671	12.891	Ignore	0.008	2.49e-08
1674	12.889	Ignore	0.01	2.42e-08
1677	12.892	Ignore	0.007	2.34e-08
1680	12.892	Ignore	0.007	2.27e-08
1683	12.89	Ignore	0.009	2.20e-08
1686	12.89	Ignore	0.009	2.14e-08
1689	12.892	Ignore	0.007	2.07e-08
1692	12.894	Ignore	0.005	2.01e-08
1695	12.892	Ignore	0.007	1.95e-08
1698	12.892	Ignore	0.007	1.89e-08
1701	12.892	Ignore	0.007	1.83e-08
1704	12.89	Ignore	0.009	1.78e-08
1707	12.892	Ignore	0.007	1.72e-08
1710	12.892	Ignore	0.007	1.67e-08
1713	12.89	Ignore	0.009	1.62e-08
1716	12.89	Ignore	0.009	1.57e-08
1719	12.89	Ignore	0.009	1.52e-08
1722	12.892	Ignore	0.007	1.47e-08
1725	12.894	Ignore	0.005	1.43e-08
1728	12.89	Ignore	0.009	1.39e-08
1731	12.892	Ignore	0.007	1.34e-08
1734	12.892	Ignore	0.007	1.30e-08
1737	12.892	Ignore	0.007	1.26e-08
1740	12.892	Ignore	0.007	1.23e-08
1743	12.892	Ignore	0.007	1.19e-08
1746	12.892	Ignore	0.007	1.15e-08
1749	12.89	Ignore	0.009	1.12e-08
1752	12.892	Ignore	0.007	1.08e-08
1755	12.892	Ignore	0.007	1.05e-08
1758	12.89	Ignore	0.009	1.02e-08
1761	12.892	Ignore	0.007	9.87e-09
1764	12.892	Ignore	0.007	9.57e-09
1767	12.89	Ignore	0.009	9.28e-09

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1770	12.892	Ignore	0.007	9.00e-09
1773	12.892	Ignore	0.007	8.72e-09
1776	12.894	Ignore	0.005	8.46e-09
1779	12.892	Ignore	0.007	8.20e-09
1782	12.89	Ignore	0.009	7.95e-09
1785	12.89	Ignore	0.009	7.71e-09
1788	12.892	Ignore	0.007	7.47e-09
1791	12.894	Ignore	0.005	7.25e-09
1794	12.894	Ignore	0.005	7.03e-09
1797	12.892	Ignore	0.007	6.81e-09
1800	12.892	Ignore	0.007	6.61e-09
1803	12.892	Ignore	0.007	6.40e-09
1806	12.89	Ignore	0.009	6.21e-09
1809	12.89	Ignore	0.009	6.02e-09
1812	12.892	Ignore	0.007	5.84e-09
1815	12.894	Ignore	0.005	5.66e-09
1818	12.892	Ignore	0.007	5.49e-09
1821	12.894	Ignore	0.005	5.32e-09
1824	12.892	Ignore	0.007	5.16e-09
1827	12.894	Ignore	0.005	5.00e-09
1830	12.892	Ignore	0.007	4.85e-09
1833	12.894	Ignore	0.005	4.70e-09
1836	12.892	Ignore	0.007	4.56e-09
1839	12.892	Ignore	0.007	4.42e-09
1842	12.892	Ignore	0.007	4.29e-09
1845	12.892	Ignore	0.007	4.16e-09
1848	12.894	Ignore	0.005	4.03e-09
1851	12.894	Ignore	0.005	3.91e-09
1854	12.892	Ignore	0.007	3.79e-09
1857	12.89	Ignore	0.009	3.67e-09
1860	12.89	Ignore	0.009	3.56e-09
1863	12.892	Ignore	0.007	3.45e-09
1866	12.89	Ignore	0.009	3.35e-09
1869	12.892	Ignore	0.007	3.25e-09
1872	12.894	Ignore	0.005	3.15e-09
1875	12.892	Ignore	0.007	3.05e-09
1878	12.894	Ignore	0.005	2.96e-09
1881	12.894	Ignore	0.005	2.87e-09
1884	12.894	Ignore	0.005	2.78e-09
1887	12.89	Ignore	0.009	2.70e-09
1890	12.89	Ignore	0.009	2.61e-09
1893	12.892	Ignore	0.007	2.53e-09
1896	12.892	Ignore	0.007	2.46e-09
1899	12.894	Ignore	0.005	2.38e-09
1902	12.892	Ignore	0.007	2.31e-09
1905	12.894	Ignore	0.005	2.24e-09
1908	12.892	Ignore	0.007	2.17e-09
1911	12.892	Ignore	0.007	2.11e-09
1914	12.894	Ignore	0.005	2.04e-09
1917	12.894	Ignore	0.005	1.98e-09
1920	12.892	Ignore	0.007	1.92e-09
1923	12.892	Ignore	0.007	1.86e-09
1926	12.894	Ignore	0.005	1.80e-09
1929	12.894	Ignore	0.005	1.75e-09

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1932	12.894	Ignore	0.005	1.70e-09
1935	12.894	Ignore	0.005	1.64e-09
1938	12.894	Ignore	0.005	1.59e-09
1941	12.892	Ignore	0.007	1.55e-09
1944	12.892	Ignore	0.007	1.50e-09
1947	12.894	Ignore	0.005	1.45e-09
1950	12.894	Ignore	0.005	1.41e-09
1953	12.892	Ignore	0.007	1.37e-09
1956	12.894	Ignore	0.005	1.32e-09
1959	12.894	Ignore	0.005	1.28e-09
1962	12.894	Ignore	0.005	1.25e-09
1965	12.895	Ignore	0.004	1.21e-09
1968	12.894	Ignore	0.005	1.17e-09
1971	12.894	Ignore	0.005	1.14e-09
1974	12.892	Ignore	0.007	1.10e-09
1977	12.892	Ignore	0.007	1.07e-09
1980	12.894	Ignore	0.005	1.03e-09
1983	12.892	Ignore	0.007	1.00e-09
1986	12.892	Ignore	0.007	9.73e-10
1989	12.892	Ignore	0.007	9.43e-10
1992	12.892	Ignore	0.007	9.14e-10
1995	12.892	Ignore	0.007	8.87e-10
1998	12.89	Ignore	0.009	8.60e-10
2001	12.892	Ignore	0.007	8.33e-10
2004	12.894	Ignore	0.005	8.08e-10
2007	12.892	Ignore	0.007	7.83e-10
2010	12.892	Ignore	0.007	7.60e-10
2013	12.894	Ignore	0.005	7.36e-10
2016	12.892	Ignore	0.007	7.14e-10
2019	12.894	Ignore	0.005	6.92e-10
2022	12.894	Ignore	0.005	6.71e-10
2025	12.892	Ignore	0.007	6.51e-10
2028	12.892	Ignore	0.007	6.31e-10
2031	12.894	Ignore	0.005	6.12e-10
2034	12.892	Ignore	0.007	5.93e-10
2037	12.892	Ignore	0.007	5.75e-10
2040	12.894	Ignore	0.005	5.58e-10
2043	12.894	Ignore	0.005	5.41e-10
2046	12.892	Ignore	0.007	5.24e-10
2049	12.892	Ignore	0.007	5.08e-10
2052	12.892	Ignore	0.007	4.93e-10
2055	12.894	Ignore	0.005	4.78e-10
2058	12.894	Ignore	0.005	4.63e-10
2061	12.892	Ignore	0.007	4.49e-10
2064	12.892	Ignore	0.007	4.36e-10
2067	12.892	Ignore	0.007	4.22e-10
2070	12.894	Ignore	0.005	4.09e-10
2073	12.894	Ignore	0.005	3.97e-10
2076	12.894	Ignore	0.005	3.85e-10
2079	12.896	Ignore	0.003	3.73e-10
2082	12.894	Ignore	0.005	3.62e-10
2085	12.896	Ignore	0.003	3.51e-10
2088	12.894	Ignore	0.005	3.40e-10
2091	12.894	Ignore	0.005	3.30e-10

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2094	12.896	Ignore	0.003	3.20e-10
2097	12.896	Ignore	0.003	3.10e-10
2100	12.894	Ignore	0.005	3.01e-10
2103	12.894	Ignore	0.005	2.91e-10
2106	12.896	Ignore	0.003	2.83e-10
2109	12.896	Ignore	0.003	2.74e-10
2112	12.897	Ignore	0.002	2.66e-10
2115	12.894	Ignore	0.005	2.58e-10
2118	12.897	Ignore	0.002	2.50e-10
2121	12.894	Ignore	0.005	2.42e-10
2124	12.897	Ignore	0.002	2.35e-10
2127	12.897	Ignore	0.002	2.28e-10
2130	12.897	Ignore	0.002	2.21e-10
2133	12.896	Ignore	0.003	2.14e-10
2136	12.896	Ignore	0.003	2.07e-10
2139	12.896	Ignore	0.003	2.01e-10
2142	12.894	Ignore	0.005	1.95e-10
2145	12.894	Ignore	0.005	1.89e-10
2148	12.892	Ignore	0.007	1.83e-10
2151	12.896	Ignore	0.003	1.78e-10
2154	12.894	Ignore	0.005	1.72e-10
2157	12.896	Ignore	0.003	1.67e-10
2160	12.896	Ignore	0.003	1.62e-10
2163	12.894	Ignore	0.005	1.57e-10
2166	12.894	Ignore	0.005	1.52e-10
2169	12.896	Ignore	0.003	1.48e-10
2172	12.894	Ignore	0.005	1.43e-10
2175	12.896	Ignore	0.003	1.39e-10
2178	12.894	Ignore	0.005	1.35e-10
2181	12.894	Ignore	0.005	1.31e-10
2184	12.896	Ignore	0.003	1.27e-10
2187	12.896	Ignore	0.003	1.23e-10
2190	12.896	Ignore	0.003	1.19e-10
2193	12.895	Ignore	0.004	1.15e-10
2196	12.895	Ignore	0.004	1.12e-10
2199	12.893	Ignore	0.006	1.08e-10
2202	12.895	Ignore	0.004	1.05e-10
2205	12.895	Ignore	0.004	1.02e-10
2208	12.896	Ignore	0.003	9.88e-11
2211	12.896	Ignore	0.003	9.58e-11
2214	12.896	Ignore	0.003	9.29e-11
2217	12.896	Ignore	0.003	9.01e-11
2220	12.896	Ignore	0.003	8.74e-11
2223	12.896	Ignore	0.003	8.47e-11
2226	12.895	Ignore	0.004	8.21e-11
2229	12.896	Ignore	0.003	7.96e-11
2232	12.895	Ignore	0.004	7.72e-11
2235	12.896	Ignore	0.003	7.48e-11
2238	12.895	Ignore	0.004	7.26e-11
2241	12.895	Ignore	0.004	7.04e-11
2244	12.896	Ignore	0.003	6.82e-11
2247	12.895	Ignore	0.004	6.61e-11
2250	12.896	Ignore	0.003	6.41e-11
2253	12.895	Ignore	0.004	6.22e-11

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2256	12.895	Ignore	0.004	6.03e-11
2259	12.895	Ignore	0.004	5.85e-11
2262	12.895	Ignore	0.004	5.67e-11
2265	12.895	Ignore	0.004	5.50e-11
2268	12.895	Ignore	0.004	5.33e-11
2271	12.893	Ignore	0.006	5.17e-11
2274	12.897	Ignore	0.002	5.01e-11
2277	12.895	Ignore	0.004	4.86e-11
2280	12.895	Ignore	0.004	4.71e-11
2283	12.893	Ignore	0.006	4.57e-11
2286	12.895	Ignore	0.004	4.43e-11
2289	12.895	Ignore	0.004	4.29e-11
2292	12.895	Ignore	0.004	4.16e-11
2295	12.897	Ignore	0.002	4.03e-11
2298	12.895	Ignore	0.004	3.91e-11
2301	12.895	Ignore	0.004	3.79e-11
2304	12.895	Ignore	0.004	3.68e-11
2307	12.895	Ignore	0.004	3.57e-11
2310	12.895	Ignore	0.004	3.46e-11
2313	12.894	Ignore	0.005	3.35e-11
2316	12.895	Ignore	0.004	3.25e-11
2319	12.896	Ignore	0.003	3.15e-11
2322	12.896	Ignore	0.003	3.06e-11
2325	12.896	Ignore	0.003	2.96e-11
2328	12.894	Ignore	0.005	2.87e-11
2331	12.896	Ignore	0.003	2.78e-11
2334	12.896	Ignore	0.003	2.70e-11
2337	12.896	Ignore	0.003	2.62e-11
2340	12.897	Ignore	0.002	2.54e-11
2343	12.896	Ignore	0.003	2.46e-11
2346	12.894	Ignore	0.005	2.39e-11
2349	12.896	Ignore	0.003	2.31e-11
2352	12.894	Ignore	0.005	2.24e-11
2355	12.898	Ignore	0.001	2.17e-11
2358	12.896	Ignore	0.003	2.11e-11
2361	12.896	Ignore	0.003	2.04e-11
2364	12.896	Ignore	0.003	1.98e-11
2367	12.893	Ignore	0.006	1.92e-11
2370	12.895	Ignore	0.004	1.86e-11
2373	12.893	Ignore	0.006	1.81e-11
2376	12.893	Ignore	0.006	1.75e-11
2379	12.895	Ignore	0.004	1.70e-11
2382	12.893	Ignore	0.006	1.65e-11
2385	12.895	Ignore	0.004	1.60e-11
2388	12.893	Ignore	0.006	1.55e-11
2391	12.895	Ignore	0.004	1.50e-11
2394	12.893	Ignore	0.006	1.46e-11
2397	12.895	Ignore	0.004	1.41e-11
2400	12.896	Ignore	0.003	1.37e-11
2403	12.897	Ignore	0.002	1.33e-11
2406	12.895	Ignore	0.004	1.29e-11
2409	12.893	Ignore	0.006	1.25e-11
2412	12.895	Ignore	0.004	1.21e-11
2415	12.893	Ignore	0.006	1.17e-11

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2418	12.895	Ignore	0.004	1.14e-11
2421	12.895	Ignore	0.004	1.10e-11
2424	12.895	Ignore	0.004	1.07e-11
2427	12.895	Ignore	0.004	1.04e-11
2430	12.895	Ignore	0.004	1.00e-11
2433	12.897	Ignore	0.002	9.74e-12
2436	12.895	Ignore	0.004	9.44e-12
2439	12.897	Ignore	0.002	9.16e-12
2442	12.895	Ignore	0.004	8.88e-12
2445	12.895	Ignore	0.004	8.61e-12
2448	12.894	Ignore	0.005	8.35e-12
2451	12.896	Ignore	0.003	8.09e-12
2454	12.894	Ignore	0.005	7.85e-12
2457	12.896	Ignore	0.003	7.61e-12
2460	12.896	Ignore	0.003	7.38e-12
2463	12.894	Ignore	0.005	7.15e-12
2466	12.896	Ignore	0.003	6.93e-12
2469	12.894	Ignore	0.005	6.72e-12
2472	12.894	Ignore	0.005	6.52e-12
2475	12.896	Ignore	0.003	6.32e-12
2478	12.894	Ignore	0.005	6.13e-12
2481	12.894	Ignore	0.005	5.94e-12
2484	12.903	Ignore	-0.004	5.76e-12
2487	12.895	Ignore	0.004	5.58e-12
2490	12.893	Ignore	0.006	5.41e-12
2493	12.893	Ignore	0.006	5.25e-12
2496	12.893	Ignore	0.006	5.09e-12
2499	12.896	Ignore	0.003	4.94e-12
2502	12.895	Ignore	0.004	4.79e-12
2505	12.893	Ignore	0.006	4.64e-12
2508	12.895	Ignore	0.004	4.50e-12
2511	12.893	Ignore	0.006	4.36e-12
2514	12.895	Ignore	0.004	4.23e-12
2517	12.893	Ignore	0.006	4.10e-12
2520	12.893	Ignore	0.006	3.98e-12
2523	12.893	Ignore	0.006	3.85e-12
2526	12.894	Ignore	0.005	3.74e-12
2529	12.895	Ignore	0.004	3.62e-12
2532	12.894	Ignore	0.005	3.51e-12
2535	12.895	Ignore	0.004	3.41e-12
2538	12.894	Ignore	0.005	3.30e-12
2541	12.894	Ignore	0.005	3.20e-12
2544	12.894	Ignore	0.005	3.10e-12
2547	12.892	Ignore	0.007	3.01e-12
2550	12.894	Ignore	0.005	2.92e-12
2553	12.894	Ignore	0.005	2.83e-12
2556	12.892	Ignore	0.007	2.74e-12
2559	12.894	Ignore	0.005	2.66e-12
2562	12.892	Ignore	0.007	2.58e-12
2565	12.893	Ignore	0.006	2.50e-12
2568	12.894	Ignore	0.005	2.42e-12
2571	12.894	Ignore	0.005	2.35e-12
2574	12.893	Ignore	0.006	2.28e-12
2577	12.896	Ignore	0.003	2.21e-12

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2580	12.894	Ignore	0.005	2.14e-12
2583	12.894	Ignore	0.005	2.08e-12
2586	12.895	Ignore	0.004	2.01e-12
2589	12.895	Ignore	0.004	1.95e-12
2592	12.891	Ignore	0.008	1.89e-12
2595	12.895	Ignore	0.004	1.84e-12
2598	12.893	Ignore	0.006	1.78e-12
2601	12.891	Ignore	0.008	1.73e-12
2604	12.895	Ignore	0.004	1.67e-12
2607	12.893	Ignore	0.006	1.62e-12
2610	12.893	Ignore	0.006	1.57e-12
2613	12.891	Ignore	0.008	1.53e-12
2616	12.892	Ignore	0.007	1.48e-12
2619	12.893	Ignore	0.006	1.43e-12
2622	12.893	Ignore	0.006	1.39e-12
2625	12.893	Ignore	0.006	1.35e-12
2628	12.893	Ignore	0.006	1.31e-12
2631	12.892	Ignore	0.007	1.27e-12
2634	12.892	Ignore	0.007	1.23e-12
2637	12.892	Ignore	0.007	1.19e-12
2640	12.894	Ignore	0.005	1.16e-12
2643	12.894	Ignore	0.005	1.12e-12
2646	12.892	Ignore	0.007	1.09e-12
2649	12.895	Ignore	0.004	1.05e-12
2652	12.894	Ignore	0.005	1.02e-12
2655	12.894	Ignore	0.005	9.90e-13
2658	12.896	Ignore	0.003	9.60e-13
2661	12.894	Ignore	0.005	9.31e-13
2664	12.897	Ignore	0.002	9.02e-13
2667	12.896	Ignore	0.003	8.75e-13
2670	12.896	Ignore	0.003	8.48e-13
2673	12.896	Ignore	0.003	8.22e-13
2676	12.894	Ignore	0.005	7.97e-13
2679	12.898	Ignore	0.001	7.73e-13
2682	12.894	Ignore	0.005	7.50e-13
2685	12.894	Ignore	0.005	7.27e-13
2688	12.894	Ignore	0.005	7.05e-13
2691	12.896	Ignore	0.003	6.83e-13
2694	12.896	Ignore	0.003	6.62e-13
2697	12.896	Ignore	0.003	6.42e-13
2700	12.896	Ignore	0.003	6.23e-13
2703	12.896	Ignore	0.003	6.04e-13
2706	12.895	Ignore	0.004	5.85e-13
2709	12.895	Ignore	0.004	5.68e-13
2712	12.895	Ignore	0.004	5.50e-13
2715	12.893	Ignore	0.006	5.34e-13
2718	12.895	Ignore	0.004	5.17e-13
2721	12.895	Ignore	0.004	5.02e-13
2724	12.895	Ignore	0.004	4.86e-13
2727	12.894	Ignore	0.005	4.72e-13
2730	12.894	Ignore	0.005	4.57e-13
2733	12.894	Ignore	0.005	4.43e-13
2736	12.895	Ignore	0.004	4.30e-13
2739	12.894	Ignore	0.005	4.17e-13

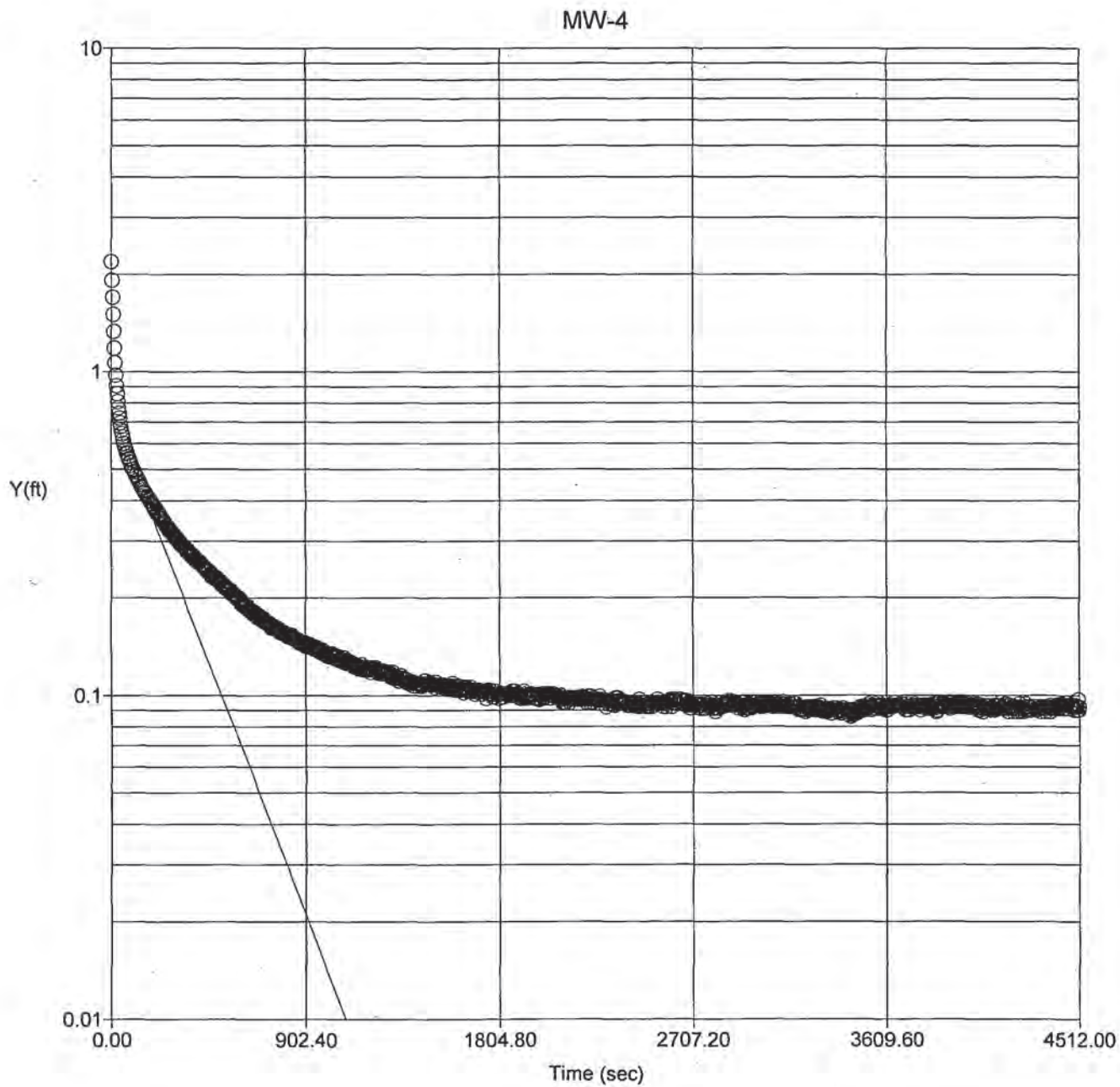
Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2742	12.894	Ignore	0.005	4.04e-13
2745	12.896	Ignore	0.003	3.92e-13
2748	12.894	Ignore	0.005	3.80e-13
2751	12.896	Ignore	0.003	3.68e-13
2754	12.892	Ignore	0.007	3.57e-13
2757	12.894	Ignore	0.005	3.46e-13
2760	12.896	Ignore	0.003	3.36e-13
2763	12.894	Ignore	0.005	3.25e-13
2766	12.896	Ignore	0.003	3.16e-13
2769	12.894	Ignore	0.005	3.06e-13
2772	12.893	Ignore	0.006	2.97e-13
2775	12.896	Ignore	0.003	2.88e-13
2778	12.894	Ignore	0.005	2.79e-13
2781	12.896	Ignore	0.003	2.70e-13
2784	12.896	Ignore	0.003	2.62e-13
2787	12.895	Ignore	0.004	2.54e-13
2790	12.895	Ignore	0.004	2.46e-13
2793	12.895	Ignore	0.004	2.39e-13
2796	12.895	Ignore	0.004	2.32e-13
2799	12.895	Ignore	0.004	2.25e-13
2802	12.895	Ignore	0.004	2.18e-13
2805	12.896	Ignore	0.003	2.11e-13
2808	12.896	Ignore	0.003	2.05e-13
2811	12.893	Ignore	0.006	1.99e-13
2814	12.896	Ignore	0.003	1.92e-13
2817	12.895	Ignore	0.004	1.87e-13
2820	12.895	Ignore	0.004	1.81e-13
2823	12.897	Ignore	0.002	1.75e-13
2826	12.895	Ignore	0.004	1.70e-13
2829	12.893	Ignore	0.006	1.65e-13
2832	12.895	Ignore	0.004	1.60e-13
2835	12.895	Ignore	0.004	1.55e-13
2838	12.895	Ignore	0.004	1.50e-13
2841	12.895	Ignore	0.004	1.46e-13
2844	12.897	Ignore	0.002	1.41e-13
2847	12.897	Ignore	0.002	1.37e-13
2850	12.897	Ignore	0.002	1.33e-13
2853	12.895	Ignore	0.004	1.29e-13
2856	12.893	Ignore	0.006	1.25e-13
2859	12.893	Ignore	0.006	1.21e-13
2862	12.893	Ignore	0.006	1.17e-13
2865	12.894	Ignore	0.005	1.14e-13
2868	12.895	Ignore	0.004	1.10e-13
2871	12.895	Ignore	0.004	1.07e-13
2874	12.895	Ignore	0.004	1.04e-13
2877	12.897	Ignore	0.002	1.01e-13
2880	12.894	Ignore	0.005	9.75e-14
2883	12.894	Ignore	0.005	9.46e-14
2886	12.894	Ignore	0.005	9.17e-14
2889	12.895	Ignore	0.004	8.89e-14
2892	12.894	Ignore	0.005	8.62e-14
2895	12.894	Ignore	0.005	8.36e-14
2898	12.894	Ignore	0.005	8.10e-14
2901	12.894	Ignore	0.005	7.86e-14

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2904	12.897	Ignore	0.002	7.62e-14
2907	12.894	Ignore	0.005	7.39e-14
2910	12.895	Ignore	0.004	7.16e-14
2913	12.894	Ignore	0.005	6.94e-14
2916	12.894	Ignore	0.005	6.73e-14
2919	12.896	Ignore	0.003	6.53e-14
2922	12.892	Ignore	0.007	6.33e-14
2925	12.896	Ignore	0.003	6.14e-14
2928	12.896	Ignore	0.003	5.95e-14
2931	12.894	Ignore	0.005	5.77e-14
2934	12.894	Ignore	0.005	5.59e-14
2937	12.896	Ignore	0.003	5.42e-14
2940	12.896	Ignore	0.003	5.26e-14
2943	12.892	Ignore	0.007	5.10e-14
2946	12.894	Ignore	0.005	4.94e-14
2949	12.894	Ignore	0.005	4.79e-14
2952	12.892	Ignore	0.007	4.65e-14
2955	12.896	Ignore	0.003	4.51e-14
2958	12.894	Ignore	0.005	4.37e-14
2961	12.894	Ignore	0.005	4.24e-14
2964	12.894	Ignore	0.005	4.11e-14
2967	12.894	Ignore	0.005	3.98e-14
2970	12.894	Ignore	0.005	3.86e-14
2973	12.894	Ignore	0.005	3.74e-14
2976	12.893	Ignore	0.006	3.63e-14
2979	12.894	Ignore	0.005	3.52e-14
2982	12.895	Ignore	0.004	3.41e-14
2985	12.893	Ignore	0.006	3.31e-14
2988	12.893	Ignore	0.006	3.21e-14
2991	12.893	Ignore	0.006	3.11e-14
2994	12.893	Ignore	0.006	3.01e-14
2997	12.893	Ignore	0.006	2.92e-14
3000	12.895	Ignore	0.004	2.83e-14
3003	12.895	Ignore	0.004	2.75e-14
3006	12.895	Ignore	0.004	2.66e-14
3009	12.895	Ignore	0.004	2.58e-14
3012	12.893	Ignore	0.006	2.50e-14
3015	12.893	Ignore	0.006	2.43e-14
3018	12.892	Ignore	0.007	2.35e-14
3021	12.895	Ignore	0.004	2.28e-14
3024	12.893	Ignore	0.006	2.21e-14
3027	12.893	Ignore	0.006	2.15e-14
3030	12.895	Ignore	0.004	2.08e-14
3033	12.895	Ignore	0.004	2.02e-14
3036	12.893	Ignore	0.006	1.96e-14
3039	12.893	Ignore	0.006	1.90e-14
3042	12.895	Ignore	0.004	1.84e-14
3045	12.897	Ignore	0.002	1.78e-14
3048	12.895	Ignore	0.004	1.73e-14
3051	12.894	Ignore	0.005	1.68e-14
3054	12.895	Ignore	0.004	1.63e-14
3057	12.897	Ignore	0.002	1.58e-14
3060	12.895	Ignore	0.004	1.53e-14
3063	12.894	Ignore	0.005	1.48e-14

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
3066	12.895	Ignore	0.004	1.44e-14
3069	12.897	Ignore	0.002	1.39e-14
3072	12.896	Ignore	0.003	1.35e-14
3075	12.896	Ignore	0.003	1.31e-14
3078	12.894	Ignore	0.005	1.27e-14
3081	12.894	Ignore	0.005	1.23e-14
3084	12.894	Ignore	0.005	1.19e-14
3087	12.894	Ignore	0.005	1.16e-14
3090	12.894	Ignore	0.005	1.12e-14
3093	12.892	Ignore	0.007	1.09e-14
3096	12.894	Ignore	0.005	1.05e-14
3099	12.893	Ignore	0.006	1.02e-14
3102	12.894	Ignore	0.005	9.91e-15
3105	12.893	Ignore	0.006	9.61e-15
3108	12.896	Ignore	0.003	9.32e-15
3111	12.894	Ignore	0.005	9.04e-15
3114	12.894	Ignore	0.005	8.76e-15
3117	12.894	Ignore	0.005	8.49e-15
3120	12.894	Ignore	0.005	8.24e-15
3123	12.893	Ignore	0.006	7.98e-15
3126	12.894	Ignore	0.005	7.74e-15
3129	12.894	Ignore	0.005	7.51e-15
3132	12.894	Ignore	0.005	7.28e-15
3135	12.894	Ignore	0.005	7.06e-15
3138	12.896	Ignore	0.003	6.84e-15
3141	12.896	Ignore	0.003	6.63e-15
3144	12.896	Ignore	0.003	6.43e-15
3147	12.894	Ignore	0.005	6.24e-15
3150	12.898	Ignore	0.001	6.05e-15
3153	12.898	Ignore	0.001	5.86e-15
3156	12.896	Ignore	0.003	5.68e-15
3159	12.898	Ignore	0.001	5.51e-15
3162	12.896	Ignore	0.003	5.34e-15
3165	12.896	Ignore	0.003	5.18e-15
3168	12.898	Ignore	0.001	5.02e-15
3171	12.894	Ignore	0.005	4.87e-15
3174	12.896	Ignore	0.003	4.72e-15
3177	12.894	Ignore	0.005	4.58e-15
3180	12.896	Ignore	0.003	4.44e-15
3183	12.898	Ignore	0.001	4.30e-15
3186	12.894	Ignore	0.005	4.17e-15
3189	12.896	Ignore	0.003	4.05e-15
3192	12.896	Ignore	0.003	3.92e-15
3195	12.896	Ignore	0.003	3.80e-15
3198	12.894	Ignore	0.005	3.69e-15
3201	12.894	Ignore	0.005	3.58e-15
3204	12.896	Ignore	0.003	3.47e-15
3207	12.898	Ignore	0.001	3.36e-15
3210	12.896	Ignore	0.003	3.26e-15
3213	12.894	Ignore	0.005	3.16e-15
3216	12.893	Ignore	0.006	0.00e+00
3219	12.893	Ignore	0.006	0.00e+00
3222	12.896	Ignore	0.003	0.00e+00
3225	12.896	Ignore	0.003	0.00e+00

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
3228	12.896	Ignore	0.003	0.00e+00
3231	12.896	Ignore	0.003	0.00e+00
3234	12.896	Ignore	0.003	0.00e+00
3237	12.895	Ignore	0.004	0.00e+00
3240	12.895	Ignore	0.004	0.00e+00
3243	12.895	Ignore	0.004	0.00e+00
3246	12.895	Ignore	0.004	0.00e+00
3249	12.895	Ignore	0.004	0.00e+00
3252	12.895	Ignore	0.004	0.00e+00
3255	12.895	Ignore	0.004	0.00e+00
3258	12.896	Ignore	0.003	0.00e+00
3261	12.895	Ignore	0.004	0.00e+00
3264	12.895	Ignore	0.004	0.00e+00
3267	12.896	Ignore	0.003	0.00e+00
3270	12.896	Ignore	0.003	0.00e+00
3273	12.897	Ignore	0.002	0.00e+00
3276	12.895	Ignore	0.004	0.00e+00
3279	12.895	Ignore	0.004	0.00e+00
3282	12.898	Ignore	0.001	0.00e+00
3285	12.897	Ignore	0.002	0.00e+00
3288	12.897	Ignore	0.002	0.00e+00
3291	12.897	Ignore	0.002	0.00e+00
3294	12.897	Ignore	0.002	0.00e+00
3297	12.895	Ignore	0.004	0.00e+00
3300	12.893	Ignore	0.006	0.00e+00
3303	12.895	Ignore	0.004	0.00e+00
3306	12.897	Ignore	0.002	0.00e+00
3309	12.895	Ignore	0.004	0.00e+00
3312	12.895	Ignore	0.004	0.00e+00
3315	12.893	Ignore	0.006	0.00e+00
3318	12.895	Ignore	0.004	0.00e+00
3321	12.895	Ignore	0.004	0.00e+00
3324	12.893	Ignore	0.006	0.00e+00
3327	12.895	Ignore	0.004	0.00e+00
3330	12.895	Ignore	0.004	0.00e+00
3333	12.895	Ignore	0.004	0.00e+00
3336	12.893	Ignore	0.006	0.00e+00
3339	12.893	Ignore	0.006	0.00e+00
3342	12.895	Ignore	0.004	0.00e+00
3345	12.895	Ignore	0.004	0.00e+00
3348	12.895	Ignore	0.004	0.00e+00
3351	12.895	Ignore	0.004	0.00e+00
3354	12.895	Ignore	0.004	0.00e+00
3357	12.895	Ignore	0.004	0.00e+00
3360	12.895	Ignore	0.004	0.00e+00
3363	12.895	Ignore	0.004	0.00e+00
3366	12.897	Ignore	0.002	0.00e+00
3369	12.897	Ignore	0.002	0.00e+00
3372	12.897	Ignore	0.002	0.00e+00
3375	12.895	Ignore	0.004	0.00e+00
3378	12.895	Ignore	0.004	0.00e+00
3381	12.895	Ignore	0.004	0.00e+00
3384	12.893	Ignore	0.006	0.00e+00
3387	12.895	Ignore	0.004	0.00e+00

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
3390	12.895	Ignore	0.004	0.00e+00
3393	12.894	Ignore	0.005	0.00e+00
3396	12.894	Ignore	0.005	0.00e+00
3399	12.895	Ignore	0.004	0.00e+00
3402	12.894	Ignore	0.005	0.00e+00
3405	12.895	Ignore	0.004	0.00e+00
3408	12.895	Ignore	0.004	0.00e+00
3411	12.895	Ignore	0.004	0.00e+00
3414	12.894	Ignore	0.005	0.00e+00
3417	12.895	Ignore	0.004	0.00e+00
3420	12.894	Ignore	0.005	0.00e+00
3423	12.895	Ignore	0.004	0.00e+00
3426	12.895	Ignore	0.004	0.00e+00
3429	12.895	Ignore	0.004	0.00e+00
3432	12.895	Ignore	0.004	0.00e+00
3435	12.895	Ignore	0.004	0.00e+00
3438	12.894	Ignore	0.005	0.00e+00
3441	12.895	Ignore	0.004	0.00e+00
3444	12.895	Ignore	0.004	0.00e+00
3447	12.897	Ignore	0.002	0.00e+00
3450	12.894	Ignore	0.005	0.00e+00
3453	12.896	Ignore	0.003	0.00e+00
3456	12.896	Ignore	0.003	0.00e+00
3459	12.895	Ignore	0.004	0.00e+00
3462	12.896	Ignore	0.003	0.00e+00
3465	12.896	Ignore	0.003	0.00e+00
3468	12.896	Ignore	0.003	0.00e+00
3471	12.896	Ignore	0.003	0.00e+00
3474	12.896	Ignore	0.003	0.00e+00
3477	12.896	Ignore	0.003	0.00e+00
3480	12.896	Ignore	0.003	0.00e+00
3483	12.894	Ignore	0.005	0.00e+00
3486	12.896	Ignore	0.003	0.00e+00
3489	12.896	Ignore	0.003	0.00e+00
3492	12.894	Ignore	0.005	0.00e+00
3495	12.896	Ignore	0.003	0.00e+00
3498	12.896	Ignore	0.003	0.00e+00
3501	12.894	Ignore	0.005	0.00e+00
3504	12.896	Ignore	0.003	0.00e+00
3507	12.896	Ignore	0.003	0.00e+00
3510	12.894	Ignore	0.005	0.00e+00
3513	12.894	Ignore	0.005	0.00e+00
3516	12.896	Ignore	0.003	0.00e+00
3519	12.896	Ignore	0.003	0.00e+00
3522	12.894	Ignore	0.005	0.00e+00
3525	12.896	Ignore	0.003	0.00e+00
3528	12.894	Ignore	0.005	0.00e+00
3531	12.896	Ignore	0.003	0.00e+00
3534	12.896	Ignore	0.003	0.00e+00
3537	12.897	Ignore	0.002	0.00e+00



LUST No.:	Site Name:		
Hydraulic Conductivity: 0.193 m/day		Well:	Slug Test Date:
Barker Lemar Engineering Consultants		CGWP: Leah Calvert, 2017	

BOUWER-RICE SLUG TEST ANALYSIS

SITE

CLIENT

CONSULTANT

Barker Lemar Engineering Consultants
1801 Industrial Circle
West Des Moines, IA, 50265
Certified Groundwater Professional: Leah Calvert, 2017

SLUG TEST

Hydraulic Conductivity: 0.193 m/day

WELL GEOMETRY

H: 27.54 ft
Lw: 13.77 ft
Le: 13.77 ft
dw: 7.25 in, rw: 3.63 in
dc: 2 in, rc: 1.0 in
Drained Filter Pack Porosity (%): 15
Effective Radius (re): 1.68 in
Slug Volume(L): 1

BOUWER-RICE COEFFICIENTS

Le/rw: 45.6
A: 2.83
B: 0.428
C: 2.49
Ln(Re/rw): 2.59

LEAST SQUARES BEST FIT

Ln(Y)-cm versus Time-sec
Slope: -3.97e-03
Intercept: 3.14

Slug Test Type: Rising head
Recovery Data Type: H: Groundwater Head
Static Water Level: 12.733 ft

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
0	10.545	Ignore	2.188	0.758
3	10.816	Ignore	1.917	0.749
6	11.034	Ignore	1.699	0.74
9	11.23	Ignore	1.503	0.732
12	11.402	Ignore	1.331	0.723
15	11.55	Ignore	1.183	0.714
18	11.668	Ignore	1.065	0.706
21	11.758	Ignore	0.975	0.697
24	11.828	Ignore	0.905	0.689
27	11.879	Ignore	0.854	0.681
30	11.925	Ignore	0.808	0.673
33	11.96	Ignore	0.773	0.665
36	11.989	Ignore	0.744	0.657
39	12.014	Ignore	0.719	0.649
42	12.039	Ignore	0.694	0.642
45	12.057	Ignore	0.676	0.634
48	12.075	Use	0.658	0.627
51	12.09	Use	0.643	0.619
54	12.105	Use	0.628	0.612
57	12.118	Use	0.615	0.605
60	12.133	Use	0.6	0.597
63	12.144	Use	0.589	0.59
66	12.152	Use	0.581	0.583
69	12.16	Use	0.573	0.576
72	12.17	Use	0.563	0.57
75	12.176	Use	0.557	0.563
78	12.186	Use	0.547	0.556
81	12.194	Use	0.539	0.55
84	12.199	Use	0.534	0.543
87	12.206	Use	0.527	0.537
90	12.21	Use	0.523	0.53
93	12.219	Use	0.514	0.524
96	12.227	Use	0.506	0.518
99	12.232	Use	0.501	0.512
102	12.236	Use	0.497	0.506
105	12.24	Use	0.493	0.5
108	12.244	Use	0.489	0.494
111	12.251	Use	0.482	0.488
114	12.256	Use	0.477	0.482
117	12.257	Use	0.476	0.476
120	12.262	Use	0.471	0.471
123	12.269	Use	0.464	0.465
126	12.27	Use	0.463	0.46
129	12.277	Use	0.456	0.454
132	12.28	Use	0.453	0.449
135	12.285	Use	0.448	0.443
138	12.29	Use	0.443	0.438
141	12.293	Use	0.44	0.433
144	12.295	Use	0.438	0.428
147	12.298	Use	0.435	0.423

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
150	12.303	Ignore	0.43	0.418
153	12.308	Ignore	0.425	0.413
156	12.311	Ignore	0.422	0.408
159	12.312	Ignore	0.421	0.403
162	12.316	Ignore	0.417	0.398
165	12.321	Ignore	0.412	0.394
168	12.322	Ignore	0.411	0.389
171	12.325	Ignore	0.408	0.384
174	12.329	Ignore	0.404	0.38
177	12.332	Ignore	0.401	0.375
180	12.333	Ignore	0.4	0.371
183	12.338	Ignore	0.395	0.366
186	12.34	Ignore	0.393	0.362
189	12.342	Ignore	0.391	0.358
192	12.346	Ignore	0.387	0.354
195	12.348	Ignore	0.385	0.349
198	12.351	Ignore	0.382	0.345
201	12.353	Ignore	0.38	0.341
204	12.354	Ignore	0.379	0.337
207	12.359	Ignore	0.374	0.333
210	12.361	Ignore	0.372	0.329
213	12.364	Ignore	0.369	0.325
216	12.368	Ignore	0.365	0.321
219	12.369	Ignore	0.364	0.318
222	12.369	Ignore	0.364	0.314
225	12.374	Ignore	0.359	0.31
228	12.377	Ignore	0.356	0.306
231	12.379	Ignore	0.354	0.303
234	12.38	Ignore	0.353	0.299
237	12.382	Ignore	0.351	0.296
240	12.387	Ignore	0.346	0.292
243	12.387	Ignore	0.346	0.289
246	12.389	Ignore	0.344	0.285
249	12.393	Ignore	0.34	0.282
252	12.395	Ignore	0.338	0.279
255	12.398	Ignore	0.335	0.275
258	12.4	Ignore	0.333	0.272
261	12.402	Ignore	0.331	0.269
264	12.403	Ignore	0.33	0.266
267	12.407	Ignore	0.326	0.262
270	12.41	Ignore	0.323	0.259
273	12.41	Ignore	0.323	0.256
276	12.411	Ignore	0.322	0.253
279	12.413	Ignore	0.32	0.25
282	12.416	Ignore	0.317	0.247
285	12.418	Ignore	0.315	0.244
288	12.418	Ignore	0.315	0.241
291	12.419	Ignore	0.314	0.239
294	12.423	Ignore	0.31	0.236
297	12.424	Ignore	0.309	0.233
300	12.428	Ignore	0.305	0.23
303	12.428	Ignore	0.305	0.227
306	12.429	Ignore	0.304	0.225
309	12.431	Ignore	0.302	0.222

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
312	12.434	Ignore	0.299	0.219
315	12.434	Ignore	0.299	0.217
318	12.436	Ignore	0.297	0.214
321	12.439	Ignore	0.294	0.212
324	12.441	Ignore	0.292	0.209
327	12.442	Ignore	0.291	0.207
330	12.442	Ignore	0.291	0.204
333	12.444	Ignore	0.289	0.202
336	12.444	Ignore	0.289	0.2
339	12.447	Ignore	0.286	0.197
342	12.447	Ignore	0.286	0.195
345	12.449	Ignore	0.284	0.192
348	12.452	Ignore	0.281	0.19
351	12.454	Ignore	0.279	0.188
354	12.452	Ignore	0.281	0.186
357	12.455	Ignore	0.278	0.184
360	12.457	Ignore	0.276	0.181
363	12.458	Ignore	0.275	0.179
366	12.46	Ignore	0.273	0.177
369	12.46	Ignore	0.273	0.175
372	12.46	Ignore	0.273	0.173
375	12.465	Ignore	0.268	0.171
378	12.463	Ignore	0.27	0.169
381	12.465	Ignore	0.268	0.167
384	12.465	Ignore	0.268	0.165
387	12.47	Ignore	0.263	0.163
390	12.47	Ignore	0.263	0.161
393	12.47	Ignore	0.263	0.159
396	12.471	Ignore	0.262	0.157
399	12.473	Ignore	0.26	0.155
402	12.475	Ignore	0.258	0.153
405	12.476	Ignore	0.257	0.152
408	12.476	Ignore	0.257	0.15
411	12.475	Ignore	0.258	0.148
414	12.479	Ignore	0.254	0.146
417	12.479	Ignore	0.254	0.145
420	12.481	Ignore	0.252	0.143
423	12.481	Ignore	0.252	0.141
426	12.483	Ignore	0.25	0.14
429	12.484	Ignore	0.249	0.138
432	12.484	Ignore	0.249	0.136
435	12.486	Ignore	0.247	0.135
438	12.489	Ignore	0.244	0.133
441	12.488	Ignore	0.245	0.131
444	12.489	Ignore	0.244	0.13
447	12.491	Ignore	0.242	0.128
450	12.493	Ignore	0.24	0.127
453	12.491	Ignore	0.242	0.125
456	12.492	Ignore	0.241	0.124
459	12.496	Ignore	0.237	0.122
462	12.497	Ignore	0.236	0.121
465	12.501	Ignore	0.232	0.119
468	12.499	Ignore	0.234	0.118
471	12.501	Ignore	0.232	0.117

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
474	12.499	Ignore	0.234	0.115
477	12.502	Ignore	0.231	0.114
480	12.504	Ignore	0.229	0.113
483	12.502	Ignore	0.231	0.111
486	12.502	Ignore	0.231	0.11
489	12.504	Ignore	0.229	0.109
492	12.505	Ignore	0.228	0.107
495	12.507	Ignore	0.226	0.106
498	12.507	Ignore	0.226	0.105
501	12.509	Ignore	0.224	0.104
504	12.51	Ignore	0.223	0.102
507	12.509	Ignore	0.224	0.101
510	12.512	Ignore	0.221	0.0999
513	12.514	Ignore	0.219	0.0987
516	12.514	Ignore	0.219	0.0976
519	12.515	Ignore	0.218	0.0964
522	12.515	Ignore	0.218	0.0953
525	12.517	Ignore	0.216	0.0941
528	12.519	Ignore	0.214	0.093
531	12.518	Ignore	0.215	0.0919
534	12.52	Ignore	0.213	0.0908
537	12.52	Ignore	0.213	0.0898
540	12.522	Ignore	0.211	0.0887
543	12.522	Ignore	0.211	0.0876
546	12.523	Ignore	0.21	0.0866
549	12.523	Ignore	0.21	0.0856
552	12.523	Ignore	0.21	0.0846
555	12.527	Ignore	0.206	0.0836
558	12.527	Ignore	0.206	0.0826
561	12.527	Ignore	0.206	0.0816
564	12.527	Ignore	0.206	0.0806
567	12.528	Ignore	0.205	0.0797
570	12.53	Ignore	0.203	0.0787
573	12.53	Ignore	0.203	0.0778
576	12.53	Ignore	0.203	0.0769
579	12.533	Ignore	0.2	0.076
582	12.533	Ignore	0.2	0.0751
585	12.535	Ignore	0.198	0.0742
588	12.535	Ignore	0.198	0.0733
591	12.533	Ignore	0.2	0.0724
594	12.535	Ignore	0.198	0.0716
597	12.537	Ignore	0.196	0.0707
600	12.54	Ignore	0.193	0.0699
603	12.538	Ignore	0.195	0.0691
606	12.54	Ignore	0.193	0.0682
609	12.542	Ignore	0.191	0.0674
612	12.542	Ignore	0.191	0.0666
615	12.542	Ignore	0.191	0.0658
618	12.543	Ignore	0.19	0.0651
621	12.545	Ignore	0.188	0.0643
624	12.545	Ignore	0.188	0.0635
627	12.545	Ignore	0.188	0.0628
630	12.545	Ignore	0.188	0.062
633	12.545	Ignore	0.188	0.0613

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
636	12.548	Ignore	0.185	0.0606
639	12.547	Ignore	0.186	0.0599
642	12.548	Ignore	0.185	0.0591
645	12.55	Ignore	0.183	0.0584
648	12.55	Ignore	0.183	0.0577
651	12.552	Ignore	0.181	0.0571
654	12.552	Ignore	0.181	0.0564
657	12.552	Ignore	0.181	0.0557
660	12.554	Ignore	0.179	0.0551
663	12.552	Ignore	0.181	0.0544
666	12.555	Ignore	0.178	0.0538
669	12.555	Ignore	0.178	0.0531
672	12.554	Ignore	0.179	0.0525
675	12.554	Ignore	0.179	0.0519
678	12.557	Ignore	0.176	0.0513
681	12.559	Ignore	0.174	0.0507
684	12.555	Ignore	0.178	0.0501
687	12.557	Ignore	0.176	0.0495
690	12.557	Ignore	0.176	0.0489
693	12.559	Ignore	0.174	0.0483
696	12.559	Ignore	0.174	0.0477
699	12.559	Ignore	0.174	0.0472
702	12.562	Ignore	0.171	0.0466
705	12.562	Ignore	0.171	0.046
708	12.56	Ignore	0.173	0.0455
711	12.562	Ignore	0.171	0.045
714	12.564	Ignore	0.169	0.0444
717	12.564	Ignore	0.169	0.0439
720	12.564	Ignore	0.169	0.0434
723	12.564	Ignore	0.169	0.0429
726	12.565	Ignore	0.168	0.0424
729	12.565	Ignore	0.168	0.0419
732	12.565	Ignore	0.168	0.0414
735	12.567	Ignore	0.166	0.0409
738	12.569	Ignore	0.164	0.0404
741	12.567	Ignore	0.166	0.0399
744	12.571	Ignore	0.162	0.0394
747	12.569	Ignore	0.164	0.039
750	12.569	Ignore	0.164	0.0385
753	12.571	Ignore	0.162	0.038
756	12.569	Ignore	0.164	0.0376
759	12.571	Ignore	0.162	0.0372
762	12.572	Ignore	0.161	0.0367
765	12.572	Ignore	0.161	0.0363
768	12.571	Ignore	0.162	0.0358
771	12.571	Ignore	0.162	0.0354
774	12.572	Ignore	0.161	0.035
777	12.572	Ignore	0.161	0.0346
780	12.574	Ignore	0.159	0.0342
783	12.576	Ignore	0.157	0.0338
786	12.576	Ignore	0.157	0.0334
789	12.576	Ignore	0.157	0.033
792	12.577	Ignore	0.156	0.0326
795	12.576	Ignore	0.157	0.0322

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
798	12.577	Ignore	0.156	0.0318
801	12.577	Ignore	0.156	0.0314
804	12.577	Ignore	0.156	0.0311
807	12.577	Ignore	0.156	0.0307
810	12.578	Ignore	0.155	0.0303
813	12.579	Ignore	0.154	0.03
816	12.578	Ignore	0.155	0.0296
819	12.578	Ignore	0.155	0.0293
822	12.581	Ignore	0.152	0.0289
825	12.581	Ignore	0.152	0.0286
828	12.581	Ignore	0.152	0.0282
831	12.581	Ignore	0.152	0.0279
834	12.581	Ignore	0.152	0.0276
837	12.579	Ignore	0.154	0.0273
840	12.581	Ignore	0.152	0.0269
843	12.581	Ignore	0.152	0.0266
846	12.583	Ignore	0.15	0.0263
849	12.583	Ignore	0.15	0.026
852	12.583	Ignore	0.15	0.0257
855	12.583	Ignore	0.15	0.0254
858	12.583	Ignore	0.15	0.0251
861	12.584	Ignore	0.149	0.0248
864	12.584	Ignore	0.149	0.0245
867	12.586	Ignore	0.147	0.0242
870	12.586	Ignore	0.147	0.0239
873	12.586	Ignore	0.147	0.0236
876	12.588	Ignore	0.145	0.0233
879	12.588	Ignore	0.145	0.0231
882	12.587	Ignore	0.146	0.0228
885	12.587	Ignore	0.146	0.0225
888	12.587	Ignore	0.146	0.0223
891	12.589	Ignore	0.144	0.022
894	12.589	Ignore	0.144	0.0217
897	12.587	Ignore	0.146	0.0215
900	12.589	Ignore	0.144	0.0212
903	12.591	Ignore	0.142	0.021
906	12.589	Ignore	0.144	0.0207
909	12.589	Ignore	0.144	0.0205
912	12.589	Ignore	0.144	0.0202
915	12.589	Ignore	0.144	0.02
918	12.589	Ignore	0.144	0.0198
921	12.589	Ignore	0.144	0.0195
924	12.592	Ignore	0.141	0.0193
927	12.59	Ignore	0.143	0.0191
930	12.59	Ignore	0.143	0.0188
933	12.592	Ignore	0.141	0.0186
936	12.592	Ignore	0.141	0.0184
939	12.592	Ignore	0.141	0.0182
942	12.594	Ignore	0.139	0.018
945	12.592	Ignore	0.141	0.0177
948	12.594	Ignore	0.139	0.0175
951	12.594	Ignore	0.139	0.0173
954	12.592	Ignore	0.141	0.0171
957	12.595	Ignore	0.138	0.0169

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
960	12.593	Ignore	0.14	0.0167
963	12.595	Ignore	0.138	0.0165
966	12.595	Ignore	0.138	0.0163
969	12.595	Ignore	0.138	0.0161
972	12.597	Ignore	0.136	0.0159
975	12.597	Ignore	0.136	0.0157
978	12.597	Ignore	0.136	0.0156
981	12.598	Ignore	0.135	0.0154
984	12.595	Ignore	0.138	0.0152
987	12.597	Ignore	0.136	0.015
990	12.598	Ignore	0.135	0.0148
993	12.598	Ignore	0.135	0.0147
996	12.598	Ignore	0.135	0.0145
999	12.6	Ignore	0.133	0.0143
1002	12.598	Ignore	0.135	0.0141
1005	12.6	Ignore	0.133	0.014
1008	12.601	Ignore	0.132	0.0138
1011	12.598	Ignore	0.135	0.0136
1014	12.598	Ignore	0.135	0.0135
1017	12.6	Ignore	0.133	0.0133
1020	12.6	Ignore	0.133	0.0132
1023	12.6	Ignore	0.133	0.013
1026	12.598	Ignore	0.135	0.0129
1029	12.6	Ignore	0.133	0.0127
1032	12.601	Ignore	0.132	0.0126
1035	12.601	Ignore	0.132	0.0124
1038	12.601	Ignore	0.132	0.0123
1041	12.601	Ignore	0.132	0.0121
1044	12.603	Ignore	0.13	0.012
1047	12.601	Ignore	0.132	0.0118
1050	12.601	Ignore	0.132	0.0117
1053	12.601	Ignore	0.132	0.0116
1056	12.601	Ignore	0.132	0.0114
1059	12.604	Ignore	0.129	0.0113
1062	12.603	Ignore	0.13	0.0111
1065	12.603	Ignore	0.13	0.011
1068	12.604	Ignore	0.129	0.0109
1071	12.604	Ignore	0.129	0.0108
1074	12.604	Ignore	0.129	0.0106
1077	12.604	Ignore	0.129	0.0105
1080	12.606	Ignore	0.127	0.0104
1083	12.602	Ignore	0.131	0.0103
1086	12.604	Ignore	0.129	0.0101
1089	12.606	Ignore	0.127	0.01
1092	12.604	Ignore	0.129	0.00989
1095	12.607	Ignore	0.126	0.00978
1098	12.606	Ignore	0.127	0.00966
1101	12.607	Ignore	0.126	0.00955
1104	12.606	Ignore	0.127	0.00943
1107	12.606	Ignore	0.127	0.00932
1110	12.606	Ignore	0.127	0.00921
1113	12.607	Ignore	0.126	0.0091
1116	12.607	Ignore	0.126	0.00899
1119	12.607	Ignore	0.126	0.00889

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1122	12.607	Ignore	0.126	0.00878
1125	12.609	Ignore	0.124	0.00868
1128	12.61	Ignore	0.123	0.00857
1131	12.609	Ignore	0.124	0.00847
1134	12.61	Ignore	0.123	0.00837
1137	12.61	Ignore	0.123	0.00827
1140	12.61	Ignore	0.123	0.00818
1143	12.609	Ignore	0.124	0.00808
1146	12.609	Ignore	0.124	0.00798
1149	12.61	Ignore	0.123	0.00789
1152	12.612	Ignore	0.121	0.00779
1155	12.612	Ignore	0.121	0.0077
1158	12.61	Ignore	0.123	0.00761
1161	12.608	Ignore	0.125	0.00752
1164	12.61	Ignore	0.123	0.00743
1167	12.612	Ignore	0.121	0.00734
1170	12.612	Ignore	0.121	0.00726
1173	12.612	Ignore	0.121	0.00717
1176	12.613	Ignore	0.12	0.00709
1179	12.612	Ignore	0.121	0.007
1182	12.613	Ignore	0.12	0.00692
1185	12.613	Ignore	0.12	0.00684
1188	12.611	Ignore	0.122	0.00676
1191	12.613	Ignore	0.12	0.00668
1194	12.611	Ignore	0.122	0.0066
1197	12.613	Ignore	0.12	0.00652
1200	12.611	Ignore	0.122	0.00644
1203	12.611	Ignore	0.122	0.00636
1206	12.615	Ignore	0.118	0.00629
1209	12.613	Ignore	0.12	0.00621
1212	12.611	Ignore	0.122	0.00614
1215	12.611	Ignore	0.122	0.00607
1218	12.613	Ignore	0.12	0.006
1221	12.613	Ignore	0.12	0.00593
1224	12.611	Ignore	0.122	0.00586
1227	12.611	Ignore	0.122	0.00579
1230	12.611	Ignore	0.122	0.00572
1233	12.613	Ignore	0.12	0.00565
1236	12.614	Ignore	0.119	0.00558
1239	12.614	Ignore	0.119	0.00552
1242	12.613	Ignore	0.12	0.00545
1245	12.616	Ignore	0.117	0.00539
1248	12.614	Ignore	0.119	0.00532
1251	12.616	Ignore	0.117	0.00526
1254	12.616	Ignore	0.117	0.0052
1257	12.616	Ignore	0.117	0.00514
1260	12.616	Ignore	0.117	0.00507
1263	12.614	Ignore	0.119	0.00501
1266	12.616	Ignore	0.117	0.00496
1269	12.616	Ignore	0.117	0.0049
1272	12.616	Ignore	0.117	0.00484
1275	12.616	Ignore	0.117	0.00478
1278	12.616	Ignore	0.117	0.00472
1281	12.615	Ignore	0.118	0.00467

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1284	12.615	Ignore	0.118	0.00461
1287	12.615	Ignore	0.118	0.00456
1290	12.615	Ignore	0.118	0.0045
1293	12.615	Ignore	0.118	0.00445
1296	12.617	Ignore	0.116	0.0044
1299	12.617	Ignore	0.116	0.00435
1302	12.619	Ignore	0.114	0.00429
1305	12.618	Ignore	0.115	0.00424
1308	12.615	Ignore	0.118	0.00419
1311	12.618	Ignore	0.115	0.00414
1314	12.62	Ignore	0.113	0.00409
1317	12.618	Ignore	0.115	0.00405
1320	12.618	Ignore	0.115	0.004
1323	12.618	Ignore	0.115	0.00395
1326	12.62	Ignore	0.113	0.0039
1329	12.62	Ignore	0.113	0.00386
1332	12.62	Ignore	0.113	0.00381
1335	12.622	Ignore	0.111	0.00377
1338	12.622	Ignore	0.111	0.00372
1341	12.62	Ignore	0.113	0.00368
1344	12.62	Ignore	0.113	0.00363
1347	12.618	Ignore	0.115	0.00359
1350	12.621	Ignore	0.112	0.00355
1353	12.621	Ignore	0.112	0.00351
1356	12.62	Ignore	0.113	0.00347
1359	12.62	Ignore	0.113	0.00342
1362	12.621	Ignore	0.112	0.00338
1365	12.621	Ignore	0.112	0.00334
1368	12.621	Ignore	0.112	0.0033
1371	12.623	Ignore	0.11	0.00326
1374	12.621	Ignore	0.112	0.00323
1377	12.623	Ignore	0.11	0.00319
1380	12.624	Ignore	0.109	0.00315
1383	12.624	Ignore	0.109	0.00311
1386	12.623	Ignore	0.11	0.00308
1389	12.624	Ignore	0.109	0.00304
1392	12.623	Ignore	0.11	0.003
1395	12.623	Ignore	0.11	0.00297
1398	12.624	Ignore	0.109	0.00293
1401	12.623	Ignore	0.11	0.0029
1404	12.626	Ignore	0.107	0.00286
1407	12.626	Ignore	0.107	0.00283
1410	12.626	Ignore	0.107	0.0028
1413	12.624	Ignore	0.109	0.00276
1416	12.624	Ignore	0.109	0.00273
1419	12.624	Ignore	0.109	0.0027
1422	12.624	Ignore	0.109	0.00267
1425	12.626	Ignore	0.107	0.00263
1428	12.624	Ignore	0.109	0.0026
1431	12.624	Ignore	0.109	0.00257
1434	12.624	Ignore	0.109	0.00254
1437	12.624	Ignore	0.109	0.00251
1440	12.626	Ignore	0.107	0.00248
1443	12.625	Ignore	0.108	0.00245

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1446	12.624	Ignore	0.109	0.00242
1449	12.624	Ignore	0.109	0.00239
1452	12.625	Ignore	0.108	0.00237
1455	12.625	Ignore	0.108	0.00234
1458	12.622	Ignore	0.111	0.00231
1461	12.622	Ignore	0.111	0.00228
1464	12.624	Ignore	0.109	0.00226
1467	12.624	Ignore	0.109	0.00223
1470	12.624	Ignore	0.109	0.0022
1473	12.624	Ignore	0.109	0.00218
1476	12.624	Ignore	0.109	0.00215
1479	12.624	Ignore	0.109	0.00213
1482	12.623	Ignore	0.11	0.0021
1485	12.625	Ignore	0.108	0.00208
1488	12.625	Ignore	0.108	0.00205
1491	12.625	Ignore	0.108	0.00203
1494	12.625	Ignore	0.108	0.002
1497	12.625	Ignore	0.108	0.00198
1500	12.625	Ignore	0.108	0.00196
1503	12.625	Ignore	0.108	0.00193
1506	12.627	Ignore	0.106	0.00191
1509	12.623	Ignore	0.11	0.00189
1512	12.625	Ignore	0.108	0.00186
1515	12.625	Ignore	0.108	0.00184
1518	12.625	Ignore	0.108	0.00182
1521	12.626	Ignore	0.107	0.0018
1524	12.626	Ignore	0.107	0.00178
1527	12.625	Ignore	0.108	0.00176
1530	12.626	Ignore	0.107	0.00174
1533	12.626	Ignore	0.107	0.00172
1536	12.626	Ignore	0.107	0.00169
1539	12.626	Ignore	0.107	0.00167
1542	12.625	Ignore	0.108	0.00165
1545	12.626	Ignore	0.107	0.00164
1548	12.626	Ignore	0.107	0.00162
1551	12.626	Ignore	0.107	0.0016
1554	12.628	Ignore	0.105	0.00158
1557	12.628	Ignore	0.105	0.00156
1560	12.626	Ignore	0.107	0.00154
1563	12.628	Ignore	0.105	0.00152
1566	12.626	Ignore	0.107	0.0015
1569	12.628	Ignore	0.105	0.00149
1572	12.628	Ignore	0.105	0.00147
1575	12.626	Ignore	0.107	0.00145
1578	12.628	Ignore	0.105	0.00143
1581	12.628	Ignore	0.105	0.00142
1584	12.628	Ignore	0.105	0.0014
1587	12.624	Ignore	0.109	0.00138
1590	12.626	Ignore	0.107	0.00137
1593	12.628	Ignore	0.105	0.00135
1596	12.627	Ignore	0.106	0.00134
1599	12.629	Ignore	0.104	0.00132
1602	12.626	Ignore	0.107	0.0013
1605	12.626	Ignore	0.107	0.00129

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1608	12.626	Ignore	0.107	0.00127
1611	12.629	Ignore	0.104	0.00126
1614	12.626	Ignore	0.107	0.00124
1617	12.629	Ignore	0.104	0.00123
1620	12.629	Ignore	0.104	0.00121
1623	12.629	Ignore	0.104	0.0012
1626	12.629	Ignore	0.104	0.00119
1629	12.629	Ignore	0.104	0.00117
1632	12.627	Ignore	0.106	0.00116
1635	12.629	Ignore	0.104	0.00114
1638	12.631	Ignore	0.102	0.00113
1641	12.627	Ignore	0.106	0.00112
1644	12.629	Ignore	0.104	0.0011
1647	12.627	Ignore	0.106	0.00109
1650	12.627	Ignore	0.106	0.00108
1653	12.627	Ignore	0.106	0.00106
1656	12.629	Ignore	0.104	0.00105
1659	12.63	Ignore	0.103	0.00104
1662	12.629	Ignore	0.104	0.00103
1665	12.629	Ignore	0.104	0.00102
1668	12.629	Ignore	0.104	1.00e-03
1671	12.627	Ignore	0.106	9.91e-04
1674	12.629	Ignore	0.104	9.79e-04
1677	12.63	Ignore	0.103	9.68e-04
1680	12.629	Ignore	0.104	9.56e-04
1683	12.63	Ignore	0.103	9.45e-04
1686	12.63	Ignore	0.103	9.34e-04
1689	12.63	Ignore	0.103	9.23e-04
1692	12.632	Ignore	0.101	9.12e-04
1695	12.629	Ignore	0.104	9.01e-04
1698	12.63	Ignore	0.103	8.90e-04
1701	12.63	Ignore	0.103	8.80e-04
1704	12.63	Ignore	0.103	8.69e-04
1707	12.63	Ignore	0.103	8.59e-04
1710	12.629	Ignore	0.104	8.49e-04
1713	12.63	Ignore	0.103	8.39e-04
1716	12.63	Ignore	0.103	8.29e-04
1719	12.63	Ignore	0.103	8.19e-04
1722	12.632	Ignore	0.101	8.09e-04
1725	12.63	Ignore	0.103	8.00e-04
1728	12.63	Ignore	0.103	7.90e-04
1731	12.632	Ignore	0.101	7.81e-04
1734	12.63	Ignore	0.103	7.72e-04
1737	12.63	Ignore	0.103	7.63e-04
1740	12.63	Ignore	0.103	7.54e-04
1743	12.635	Ignore	0.098	7.45e-04
1746	12.63	Ignore	0.103	7.36e-04
1749	12.63	Ignore	0.103	7.27e-04
1752	12.632	Ignore	0.101	7.18e-04
1755	12.629	Ignore	0.104	7.10e-04
1758	12.632	Ignore	0.101	7.02e-04
1761	12.632	Ignore	0.101	6.93e-04
1764	12.63	Ignore	0.103	6.85e-04
1767	12.632	Ignore	0.101	6.77e-04

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1770	12.632	Ignore	0.101	6.69e-04
1773	12.634	Ignore	0.099	6.61e-04
1776	12.632	Ignore	0.101	6.53e-04
1779	12.63	Ignore	0.103	6.45e-04
1782	12.63	Ignore	0.103	6.38e-04
1785	12.634	Ignore	0.099	6.30e-04
1788	12.63	Ignore	0.103	6.23e-04
1791	12.632	Ignore	0.101	6.15e-04
1794	12.633	Ignore	0.1	6.08e-04
1797	12.632	Ignore	0.101	6.01e-04
1800	12.635	Ignore	0.098	5.94e-04
1803	12.632	Ignore	0.101	5.87e-04
1806	12.632	Ignore	0.101	5.80e-04
1809	12.632	Ignore	0.101	5.73e-04
1812	12.632	Ignore	0.101	5.66e-04
1815	12.634	Ignore	0.099	5.59e-04
1818	12.634	Ignore	0.099	5.53e-04
1821	12.634	Ignore	0.099	5.46e-04
1824	12.632	Ignore	0.101	5.40e-04
1827	12.632	Ignore	0.101	5.33e-04
1830	12.632	Ignore	0.101	5.27e-04
1833	12.632	Ignore	0.101	5.21e-04
1836	12.632	Ignore	0.101	5.15e-04
1839	12.632	Ignore	0.101	5.08e-04
1842	12.632	Ignore	0.101	5.02e-04
1845	12.632	Ignore	0.101	4.96e-04
1848	12.632	Ignore	0.101	4.91e-04
1851	12.632	Ignore	0.101	4.85e-04
1854	12.632	Ignore	0.101	4.79e-04
1857	12.633	Ignore	0.1	4.73e-04
1860	12.633	Ignore	0.1	4.68e-04
1863	12.63	Ignore	0.103	4.62e-04
1866	12.632	Ignore	0.101	4.57e-04
1869	12.633	Ignore	0.1	4.51e-04
1872	12.63	Ignore	0.103	4.46e-04
1875	12.633	Ignore	0.1	4.41e-04
1878	12.63	Ignore	0.103	4.35e-04
1881	12.632	Ignore	0.101	4.30e-04
1884	12.632	Ignore	0.101	4.25e-04
1887	12.633	Ignore	0.1	4.20e-04
1890	12.632	Ignore	0.101	4.15e-04
1893	12.633	Ignore	0.1	4.10e-04
1896	12.633	Ignore	0.1	4.05e-04
1899	12.635	Ignore	0.098	4.01e-04
1902	12.633	Ignore	0.1	3.96e-04
1905	12.633	Ignore	0.1	3.91e-04
1908	12.635	Ignore	0.098	3.87e-04
1911	12.635	Ignore	0.098	3.82e-04
1914	12.633	Ignore	0.1	3.77e-04
1917	12.63	Ignore	0.103	3.73e-04
1920	12.632	Ignore	0.101	3.69e-04
1923	12.635	Ignore	0.098	3.64e-04
1926	12.633	Ignore	0.1	3.60e-04
1929	12.635	Ignore	0.098	3.56e-04

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
1932	12.635	Ignore	0.098	3.51e-04
1935	12.633	Ignore	0.1	3.47e-04
1938	12.635	Ignore	0.098	3.43e-04
1941	12.633	Ignore	0.1	3.39e-04
1944	12.633	Ignore	0.1	3.35e-04
1947	12.632	Ignore	0.101	3.31e-04
1950	12.633	Ignore	0.1	3.27e-04
1953	12.633	Ignore	0.1	3.23e-04
1956	12.633	Ignore	0.1	3.19e-04
1959	12.632	Ignore	0.101	3.16e-04
1962	12.633	Ignore	0.1	3.12e-04
1965	12.635	Ignore	0.098	3.08e-04
1968	12.633	Ignore	0.1	3.05e-04
1971	12.633	Ignore	0.1	3.01e-04
1974	12.635	Ignore	0.098	2.97e-04
1977	12.635	Ignore	0.098	2.94e-04
1980	12.635	Ignore	0.098	2.90e-04
1983	12.633	Ignore	0.1	2.87e-04
1986	12.633	Ignore	0.1	2.84e-04
1989	12.636	Ignore	0.097	2.80e-04
1992	12.635	Ignore	0.098	2.77e-04
1995	12.633	Ignore	0.1	2.74e-04
1998	12.633	Ignore	0.1	2.70e-04
2001	12.632	Ignore	0.101	2.67e-04
2004	12.632	Ignore	0.101	2.64e-04
2007	12.632	Ignore	0.101	2.61e-04
2010	12.635	Ignore	0.098	2.58e-04
2013	12.633	Ignore	0.1	2.55e-04
2016	12.633	Ignore	0.1	2.52e-04
2019	12.633	Ignore	0.1	2.49e-04
2022	12.633	Ignore	0.1	2.46e-04
2025	12.632	Ignore	0.101	2.43e-04
2028	12.632	Ignore	0.101	2.40e-04
2031	12.633	Ignore	0.1	2.37e-04
2034	12.633	Ignore	0.1	2.34e-04
2037	12.635	Ignore	0.098	2.32e-04
2040	12.633	Ignore	0.1	2.29e-04
2043	12.633	Ignore	0.1	2.26e-04
2046	12.635	Ignore	0.098	2.23e-04
2049	12.632	Ignore	0.101	2.21e-04
2052	12.632	Ignore	0.101	2.18e-04
2055	12.633	Ignore	0.1	2.16e-04
2058	12.633	Ignore	0.1	2.13e-04
2061	12.633	Ignore	0.1	2.10e-04
2064	12.633	Ignore	0.1	2.08e-04
2067	12.633	Ignore	0.1	2.05e-04
2070	12.633	Ignore	0.1	2.03e-04
2073	12.635	Ignore	0.098	2.01e-04
2076	12.635	Ignore	0.098	1.98e-04
2079	12.635	Ignore	0.098	1.96e-04
2082	12.635	Ignore	0.098	1.94e-04
2085	12.635	Ignore	0.098	1.91e-04
2088	12.633	Ignore	0.1	1.89e-04
2091	12.636	Ignore	0.097	1.87e-04

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2094	12.635	Ignore	0.098	1.85e-04
2097	12.638	Ignore	0.095	1.82e-04
2100	12.635	Ignore	0.098	1.80e-04
2103	12.636	Ignore	0.097	1.78e-04
2106	12.638	Ignore	0.095	1.76e-04
2109	12.635	Ignore	0.098	1.74e-04
2112	12.638	Ignore	0.095	1.72e-04
2115	12.635	Ignore	0.098	1.70e-04
2118	12.636	Ignore	0.097	1.68e-04
2121	12.636	Ignore	0.097	1.66e-04
2124	12.635	Ignore	0.098	1.64e-04
2127	12.636	Ignore	0.097	1.62e-04
2130	12.638	Ignore	0.095	1.60e-04
2133	12.635	Ignore	0.098	1.58e-04
2136	12.636	Ignore	0.097	1.56e-04
2139	12.635	Ignore	0.098	1.54e-04
2142	12.636	Ignore	0.097	1.53e-04
2145	12.635	Ignore	0.098	1.51e-04
2148	12.636	Ignore	0.097	1.49e-04
2151	12.636	Ignore	0.097	1.47e-04
2154	12.635	Ignore	0.098	1.45e-04
2157	12.636	Ignore	0.097	1.44e-04
2160	12.635	Ignore	0.098	1.42e-04
2163	12.635	Ignore	0.098	1.40e-04
2166	12.636	Ignore	0.097	1.39e-04
2169	12.636	Ignore	0.097	1.37e-04
2172	12.636	Ignore	0.097	1.35e-04
2175	12.636	Ignore	0.097	1.34e-04
2178	12.635	Ignore	0.098	1.32e-04
2181	12.635	Ignore	0.098	1.31e-04
2184	12.635	Ignore	0.098	1.29e-04
2187	12.635	Ignore	0.098	1.28e-04
2190	12.634	Ignore	0.099	1.26e-04
2193	12.636	Ignore	0.097	1.25e-04
2196	12.636	Ignore	0.097	1.23e-04
2199	12.636	Ignore	0.097	1.22e-04
2202	12.636	Ignore	0.097	1.20e-04
2205	12.636	Ignore	0.097	1.19e-04
2208	12.636	Ignore	0.097	1.17e-04
2211	12.638	Ignore	0.095	1.16e-04
2214	12.634	Ignore	0.099	1.15e-04
2217	12.634	Ignore	0.099	1.13e-04
2220	12.634	Ignore	0.099	1.12e-04
2223	12.636	Ignore	0.097	1.11e-04
2226	12.638	Ignore	0.095	1.09e-04
2229	12.636	Ignore	0.097	1.08e-04
2232	12.634	Ignore	0.099	1.07e-04
2235	12.636	Ignore	0.097	1.05e-04
2238	12.638	Ignore	0.095	1.04e-04
2241	12.636	Ignore	0.097	1.03e-04
2244	12.636	Ignore	0.097	1.02e-04
2247	12.636	Ignore	0.097	1.01e-04
2250	12.636	Ignore	0.097	9.93e-05
2253	12.636	Ignore	0.097	9.81e-05

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2256	12.636	Ignore	0.097	9.70e-05
2259	12.636	Ignore	0.097	9.58e-05
2262	12.636	Ignore	0.097	9.47e-05
2265	12.636	Ignore	0.097	9.36e-05
2268	12.636	Ignore	0.097	9.25e-05
2271	12.636	Ignore	0.097	9.14e-05
2274	12.634	Ignore	0.099	9.03e-05
2277	12.636	Ignore	0.097	8.92e-05
2280	12.636	Ignore	0.097	8.82e-05
2283	12.637	Ignore	0.096	8.71e-05
2286	12.636	Ignore	0.097	8.61e-05
2289	12.636	Ignore	0.097	8.51e-05
2292	12.636	Ignore	0.097	8.40e-05
2295	12.637	Ignore	0.096	8.31e-05
2298	12.637	Ignore	0.096	8.21e-05
2301	12.641	Ignore	0.092	8.11e-05
2304	12.637	Ignore	0.096	8.01e-05
2307	12.637	Ignore	0.096	7.92e-05
2310	12.637	Ignore	0.096	7.82e-05
2313	12.639	Ignore	0.094	7.73e-05
2316	12.637	Ignore	0.096	7.64e-05
2319	12.637	Ignore	0.096	7.55e-05
2322	12.637	Ignore	0.096	7.46e-05
2325	12.639	Ignore	0.094	7.37e-05
2328	12.637	Ignore	0.096	7.28e-05
2331	12.639	Ignore	0.094	7.20e-05
2334	12.639	Ignore	0.094	7.11e-05
2337	12.639	Ignore	0.094	7.03e-05
2340	12.64	Ignore	0.093	6.95e-05
2343	12.635	Ignore	0.098	6.86e-05
2346	12.635	Ignore	0.098	6.78e-05
2349	12.639	Ignore	0.094	6.70e-05
2352	12.637	Ignore	0.096	6.62e-05
2355	12.637	Ignore	0.096	6.54e-05
2358	12.635	Ignore	0.098	6.47e-05
2361	12.638	Ignore	0.095	6.39e-05
2364	12.637	Ignore	0.096	6.31e-05
2367	12.638	Ignore	0.095	6.24e-05
2370	12.637	Ignore	0.096	6.16e-05
2373	12.637	Ignore	0.096	6.09e-05
2376	12.637	Ignore	0.096	6.02e-05
2379	12.638	Ignore	0.095	5.95e-05
2382	12.638	Ignore	0.095	5.88e-05
2385	12.638	Ignore	0.095	5.81e-05
2388	12.638	Ignore	0.095	5.74e-05
2391	12.638	Ignore	0.095	5.67e-05
2394	12.638	Ignore	0.095	5.60e-05
2397	12.638	Ignore	0.095	5.54e-05
2400	12.64	Ignore	0.093	5.47e-05
2403	12.64	Ignore	0.093	5.41e-05
2406	12.638	Ignore	0.095	5.34e-05
2409	12.638	Ignore	0.095	5.28e-05
2412	12.638	Ignore	0.095	5.22e-05
2415	12.64	Ignore	0.093	5.16e-05

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2418	12.64	Ignore	0.093	5.09e-05
2421	12.638	Ignore	0.095	5.03e-05
2424	12.638	Ignore	0.095	4.97e-05
2427	12.638	Ignore	0.095	4.92e-05
2430	12.64	Ignore	0.093	4.86e-05
2433	12.638	Ignore	0.095	4.80e-05
2436	12.638	Ignore	0.095	4.74e-05
2439	12.64	Ignore	0.093	4.69e-05
2442	12.638	Ignore	0.095	4.63e-05
2445	12.64	Ignore	0.093	4.58e-05
2448	12.638	Ignore	0.095	4.52e-05
2451	12.641	Ignore	0.092	4.47e-05
2454	12.64	Ignore	0.093	4.42e-05
2457	12.636	Ignore	0.097	4.36e-05
2460	12.638	Ignore	0.095	4.31e-05
2463	12.64	Ignore	0.093	4.26e-05
2466	12.64	Ignore	0.093	4.21e-05
2469	12.64	Ignore	0.093	4.16e-05
2472	12.64	Ignore	0.093	4.11e-05
2475	12.64	Ignore	0.093	4.06e-05
2478	12.638	Ignore	0.095	4.01e-05
2481	12.638	Ignore	0.095	3.97e-05
2484	12.641	Ignore	0.092	3.92e-05
2487	12.638	Ignore	0.095	3.87e-05
2490	12.641	Ignore	0.092	3.83e-05
2493	12.64	Ignore	0.093	3.78e-05
2496	12.64	Ignore	0.093	3.74e-05
2499	12.641	Ignore	0.092	3.69e-05
2502	12.64	Ignore	0.093	3.65e-05
2505	12.639	Ignore	0.094	3.61e-05
2508	12.639	Ignore	0.094	3.56e-05
2511	12.638	Ignore	0.095	3.52e-05
2514	12.641	Ignore	0.092	3.48e-05
2517	12.639	Ignore	0.094	3.44e-05
2520	12.639	Ignore	0.094	3.40e-05
2523	12.639	Ignore	0.094	3.36e-05
2526	12.638	Ignore	0.095	3.32e-05
2529	12.639	Ignore	0.094	3.28e-05
2532	12.638	Ignore	0.095	3.24e-05
2535	12.638	Ignore	0.095	3.20e-05
2538	12.639	Ignore	0.094	3.16e-05
2541	12.636	Ignore	0.097	3.12e-05
2544	12.639	Ignore	0.094	3.09e-05
2547	12.638	Ignore	0.095	3.05e-05
2550	12.639	Ignore	0.094	3.02e-05
2553	12.639	Ignore	0.094	2.98e-05
2556	12.638	Ignore	0.095	2.94e-05
2559	12.638	Ignore	0.095	2.91e-05
2562	12.638	Ignore	0.095	2.87e-05
2565	12.639	Ignore	0.094	2.84e-05
2568	12.641	Ignore	0.092	2.81e-05
2571	12.638	Ignore	0.095	2.77e-05
2574	12.639	Ignore	0.094	2.74e-05
2577	12.639	Ignore	0.094	2.71e-05

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2580	12.639	Ignore	0.094	2.68e-05
2583	12.641	Ignore	0.092	2.64e-05
2586	12.639	Ignore	0.094	2.61e-05
2589	12.639	Ignore	0.094	2.58e-05
2592	12.638	Ignore	0.095	2.55e-05
2595	12.637	Ignore	0.096	2.52e-05
2598	12.637	Ignore	0.096	2.49e-05
2601	12.637	Ignore	0.096	2.46e-05
2604	12.636	Ignore	0.097	2.43e-05
2607	12.641	Ignore	0.092	2.40e-05
2610	12.636	Ignore	0.097	2.38e-05
2613	12.636	Ignore	0.097	2.35e-05
2616	12.636	Ignore	0.097	2.32e-05
2619	12.636	Ignore	0.097	2.29e-05
2622	12.637	Ignore	0.096	2.26e-05
2625	12.637	Ignore	0.096	2.24e-05
2628	12.639	Ignore	0.094	2.21e-05
2631	12.639	Ignore	0.094	2.19e-05
2634	12.639	Ignore	0.094	2.16e-05
2637	12.639	Ignore	0.094	2.13e-05
2640	12.639	Ignore	0.094	2.11e-05
2643	12.636	Ignore	0.097	2.08e-05
2646	12.636	Ignore	0.097	2.06e-05
2649	12.639	Ignore	0.094	2.03e-05
2652	12.639	Ignore	0.094	2.01e-05
2655	12.639	Ignore	0.094	1.99e-05
2658	12.637	Ignore	0.096	1.96e-05
2661	12.639	Ignore	0.094	1.94e-05
2664	12.637	Ignore	0.096	1.92e-05
2667	12.637	Ignore	0.096	1.89e-05
2670	12.637	Ignore	0.096	1.87e-05
2673	12.64	Ignore	0.093	1.85e-05
2676	12.639	Ignore	0.094	1.83e-05
2679	12.637	Ignore	0.096	1.81e-05
2682	12.64	Ignore	0.093	1.78e-05
2685	12.64	Ignore	0.093	1.76e-05
2688	12.64	Ignore	0.093	1.74e-05
2691	12.642	Ignore	0.091	1.72e-05
2694	12.64	Ignore	0.093	1.70e-05
2697	12.642	Ignore	0.091	1.68e-05
2700	12.64	Ignore	0.093	1.66e-05
2703	12.64	Ignore	0.093	1.64e-05
2706	12.64	Ignore	0.093	1.62e-05
2709	12.64	Ignore	0.093	1.60e-05
2712	12.639	Ignore	0.094	1.58e-05
2715	12.639	Ignore	0.094	1.57e-05
2718	12.64	Ignore	0.093	1.55e-05
2721	12.639	Ignore	0.094	1.53e-05
2724	12.639	Ignore	0.094	1.51e-05
2727	12.639	Ignore	0.094	1.49e-05
2730	12.639	Ignore	0.094	1.47e-05
2733	12.639	Ignore	0.094	1.46e-05
2736	12.639	Ignore	0.094	1.44e-05
2739	12.639	Ignore	0.094	1.42e-05

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2742	12.642	Ignore	0.091	1.41e-05
2745	12.64	Ignore	0.093	1.39e-05
2748	12.639	Ignore	0.094	1.37e-05
2751	12.64	Ignore	0.093	1.36e-05
2754	12.639	Ignore	0.094	1.34e-05
2757	12.642	Ignore	0.091	1.32e-05
2760	12.642	Ignore	0.091	1.31e-05
2763	12.642	Ignore	0.091	1.29e-05
2766	12.642	Ignore	0.091	1.28e-05
2769	12.64	Ignore	0.093	1.26e-05
2772	12.639	Ignore	0.094	1.25e-05
2775	12.64	Ignore	0.093	1.23e-05
2778	12.639	Ignore	0.094	1.22e-05
2781	12.64	Ignore	0.093	1.20e-05
2784	12.64	Ignore	0.093	1.19e-05
2787	12.64	Ignore	0.093	1.18e-05
2790	12.64	Ignore	0.093	1.16e-05
2793	12.638	Ignore	0.095	1.15e-05
2796	12.642	Ignore	0.091	1.13e-05
2799	12.642	Ignore	0.091	1.12e-05
2802	12.64	Ignore	0.093	1.11e-05
2805	12.642	Ignore	0.091	1.09e-05
2808	12.642	Ignore	0.091	1.08e-05
2811	12.644	Ignore	0.089	1.07e-05
2814	12.642	Ignore	0.091	1.06e-05
2817	12.642	Ignore	0.091	1.04e-05
2820	12.642	Ignore	0.091	1.03e-05
2823	12.642	Ignore	0.091	1.02e-05
2826	12.642	Ignore	0.091	1.01e-05
2829	12.642	Ignore	0.091	9.95e-06
2832	12.64	Ignore	0.093	9.83e-06
2835	12.64	Ignore	0.093	9.72e-06
2838	12.638	Ignore	0.095	9.60e-06
2841	12.638	Ignore	0.095	9.49e-06
2844	12.64	Ignore	0.093	9.37e-06
2847	12.64	Ignore	0.093	9.26e-06
2850	12.64	Ignore	0.093	9.15e-06
2853	12.64	Ignore	0.093	9.05e-06
2856	12.638	Ignore	0.095	8.94e-06
2859	12.64	Ignore	0.093	8.83e-06
2862	12.64	Ignore	0.093	8.73e-06
2865	12.638	Ignore	0.095	8.62e-06
2868	12.64	Ignore	0.093	8.52e-06
2871	12.638	Ignore	0.095	8.42e-06
2874	12.637	Ignore	0.096	8.32e-06
2877	12.638	Ignore	0.095	8.22e-06
2880	12.638	Ignore	0.095	8.13e-06
2883	12.637	Ignore	0.096	8.03e-06
2886	12.638	Ignore	0.095	7.93e-06
2889	12.64	Ignore	0.093	7.84e-06
2892	12.64	Ignore	0.093	7.75e-06
2895	12.638	Ignore	0.095	7.66e-06
2898	12.64	Ignore	0.093	7.56e-06
2901	12.638	Ignore	0.095	7.47e-06

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
2904	12.64	Ignore	0.093	7.39e-06
2907	12.64	Ignore	0.093	7.30e-06
2910	12.64	Ignore	0.093	7.21e-06
2913	12.64	Ignore	0.093	7.13e-06
2916	12.64	Ignore	0.093	7.04e-06
2919	12.64	Ignore	0.093	6.96e-06
2922	12.642	Ignore	0.091	6.88e-06
2925	12.64	Ignore	0.093	6.79e-06
2928	12.638	Ignore	0.095	6.71e-06
2931	12.638	Ignore	0.095	6.63e-06
2934	12.64	Ignore	0.093	6.56e-06
2937	12.64	Ignore	0.093	6.48e-06
2940	12.64	Ignore	0.093	6.40e-06
2943	12.642	Ignore	0.091	6.33e-06
2946	12.643	Ignore	0.09	6.25e-06
2949	12.638	Ignore	0.095	6.18e-06
2952	12.642	Ignore	0.091	6.10e-06
2955	12.642	Ignore	0.091	6.03e-06
2958	12.642	Ignore	0.091	5.96e-06
2961	12.64	Ignore	0.093	5.89e-06
2964	12.64	Ignore	0.093	5.82e-06
2967	12.642	Ignore	0.091	5.75e-06
2970	12.64	Ignore	0.093	5.68e-06
2973	12.64	Ignore	0.093	5.61e-06
2976	12.642	Ignore	0.091	5.55e-06
2979	12.638	Ignore	0.095	5.48e-06
2982	12.64	Ignore	0.093	5.42e-06
2985	12.638	Ignore	0.095	5.35e-06
2988	12.638	Ignore	0.095	5.29e-06
2991	12.638	Ignore	0.095	5.23e-06
2994	12.64	Ignore	0.093	5.17e-06
2997	12.64	Ignore	0.093	5.10e-06
3000	12.64	Ignore	0.093	5.04e-06
3003	12.638	Ignore	0.095	4.98e-06
3006	12.64	Ignore	0.093	4.92e-06
3009	12.64	Ignore	0.093	4.87e-06
3012	12.64	Ignore	0.093	4.81e-06
3015	12.64	Ignore	0.093	4.75e-06
3018	12.64	Ignore	0.093	4.70e-06
3021	12.638	Ignore	0.095	4.64e-06
3024	12.641	Ignore	0.092	4.58e-06
3027	12.638	Ignore	0.095	4.53e-06
3030	12.641	Ignore	0.092	4.48e-06
3033	12.638	Ignore	0.095	4.42e-06
3036	12.64	Ignore	0.093	4.37e-06
3039	12.638	Ignore	0.095	4.32e-06
3042	12.64	Ignore	0.093	4.27e-06
3045	12.638	Ignore	0.095	4.22e-06
3048	12.64	Ignore	0.093	4.17e-06
3051	12.64	Ignore	0.093	4.12e-06
3054	12.64	Ignore	0.093	4.07e-06
3057	12.638	Ignore	0.095	4.02e-06
3060	12.638	Ignore	0.095	3.97e-06
3063	12.64	Ignore	0.093	3.93e-06

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
3066	12.64	Ignore	0.093	3.88e-06
3069	12.64	Ignore	0.093	3.83e-06
3072	12.64	Ignore	0.093	3.79e-06
3075	12.641	Ignore	0.092	3.74e-06
3078	12.64	Ignore	0.093	3.70e-06
3081	12.639	Ignore	0.094	3.66e-06
3084	12.638	Ignore	0.095	3.61e-06
3087	12.638	Ignore	0.095	3.57e-06
3090	12.64	Ignore	0.093	3.53e-06
3093	12.638	Ignore	0.095	3.49e-06
3096	12.641	Ignore	0.092	3.44e-06
3099	12.639	Ignore	0.094	3.40e-06
3102	12.641	Ignore	0.092	3.36e-06
3105	12.641	Ignore	0.092	3.32e-06
3108	12.64	Ignore	0.093	3.28e-06
3111	12.639	Ignore	0.094	3.24e-06
3114	12.641	Ignore	0.092	3.21e-06
3117	12.639	Ignore	0.094	3.17e-06
3120	12.639	Ignore	0.094	3.13e-06
3123	12.639	Ignore	0.094	3.09e-06
3126	12.641	Ignore	0.092	3.06e-06
3129	12.641	Ignore	0.092	3.02e-06
3132	12.641	Ignore	0.092	2.99e-06
3135	12.639	Ignore	0.094	2.95e-06
3138	12.639	Ignore	0.094	2.91e-06
3141	12.639	Ignore	0.094	2.88e-06
3144	12.641	Ignore	0.092	2.85e-06
3147	12.641	Ignore	0.092	2.81e-06
3150	12.641	Ignore	0.092	2.78e-06
3153	12.641	Ignore	0.092	2.75e-06
3156	12.639	Ignore	0.094	2.71e-06
3159	12.639	Ignore	0.094	2.68e-06
3162	12.641	Ignore	0.092	2.65e-06
3165	12.641	Ignore	0.092	2.62e-06
3168	12.638	Ignore	0.095	2.59e-06
3171	12.641	Ignore	0.092	2.56e-06
3174	12.641	Ignore	0.092	2.53e-06
3177	12.639	Ignore	0.094	2.50e-06
3180	12.641	Ignore	0.092	2.47e-06
3183	12.641	Ignore	0.092	2.44e-06
3186	12.639	Ignore	0.094	2.41e-06
3189	12.641	Ignore	0.092	2.38e-06
3192	12.641	Ignore	0.092	2.35e-06
3195	12.641	Ignore	0.092	2.32e-06
3198	12.641	Ignore	0.092	2.30e-06
3201	12.643	Ignore	0.09	2.27e-06
3204	12.643	Ignore	0.09	2.24e-06
3207	12.643	Ignore	0.09	2.22e-06
3210	12.643	Ignore	0.09	2.19e-06
3213	12.643	Ignore	0.09	2.16e-06
3216	12.643	Ignore	0.09	2.14e-06
3219	12.643	Ignore	0.09	2.11e-06
3222	12.643	Ignore	0.09	2.09e-06
3225	12.643	Ignore	0.09	2.06e-06

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
3228	12.644	Ignore	0.089	2.04e-06
3231	12.644	Ignore	0.089	2.01e-06
3234	12.643	Ignore	0.09	1.99e-06
3237	12.641	Ignore	0.092	1.97e-06
3240	12.641	Ignore	0.092	1.94e-06
3243	12.643	Ignore	0.09	1.92e-06
3246	12.643	Ignore	0.09	1.90e-06
3249	12.641	Ignore	0.092	1.88e-06
3252	12.643	Ignore	0.09	1.85e-06
3255	12.641	Ignore	0.092	1.83e-06
3258	12.641	Ignore	0.092	1.81e-06
3261	12.641	Ignore	0.092	1.79e-06
3264	12.641	Ignore	0.092	1.77e-06
3267	12.641	Ignore	0.092	1.75e-06
3270	12.641	Ignore	0.092	1.73e-06
3273	12.643	Ignore	0.09	1.70e-06
3276	12.641	Ignore	0.092	1.68e-06
3279	12.641	Ignore	0.092	1.66e-06
3282	12.643	Ignore	0.09	1.64e-06
3285	12.641	Ignore	0.092	1.63e-06
3288	12.641	Ignore	0.092	1.61e-06
3291	12.643	Ignore	0.09	1.59e-06
3294	12.643	Ignore	0.09	1.57e-06
3297	12.642	Ignore	0.091	1.55e-06
3300	12.64	Ignore	0.093	1.53e-06
3303	12.642	Ignore	0.091	1.51e-06
3306	12.642	Ignore	0.091	1.50e-06
3309	12.642	Ignore	0.091	1.48e-06
3312	12.644	Ignore	0.089	1.46e-06
3315	12.642	Ignore	0.091	1.44e-06
3318	12.644	Ignore	0.089	1.43e-06
3321	12.644	Ignore	0.089	1.41e-06
3324	12.642	Ignore	0.091	1.39e-06
3327	12.642	Ignore	0.091	1.38e-06
3330	12.644	Ignore	0.089	1.36e-06
3333	12.644	Ignore	0.089	1.34e-06
3336	12.643	Ignore	0.09	1.33e-06
3339	12.643	Ignore	0.09	1.31e-06
3342	12.643	Ignore	0.09	1.30e-06
3345	12.643	Ignore	0.09	1.28e-06
3348	12.645	Ignore	0.088	1.27e-06
3351	12.643	Ignore	0.09	1.25e-06
3354	12.645	Ignore	0.088	1.24e-06
3357	12.643	Ignore	0.09	1.22e-06
3360	12.642	Ignore	0.091	1.21e-06
3363	12.643	Ignore	0.09	1.19e-06
3366	12.642	Ignore	0.091	1.18e-06
3369	12.642	Ignore	0.091	1.16e-06
3372	12.642	Ignore	0.091	1.15e-06
3375	12.644	Ignore	0.089	1.14e-06
3378	12.644	Ignore	0.089	1.12e-06
3381	12.644	Ignore	0.089	1.11e-06
3384	12.644	Ignore	0.089	1.10e-06
3387	12.644	Ignore	0.089	1.08e-06

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
3390	12.643	Ignore	0.09	1.07e-06
3393	12.644	Ignore	0.089	1.06e-06
3396	12.645	Ignore	0.088	1.05e-06
3399	12.645	Ignore	0.088	1.03e-06
3402	12.643	Ignore	0.09	1.02e-06
3405	12.642	Ignore	0.091	1.01e-06
3408	12.644	Ignore	0.089	9.97e-07
3411	12.644	Ignore	0.089	9.85e-07
3414	12.643	Ignore	0.09	9.73e-07
3417	12.643	Ignore	0.09	9.62e-07
3420	12.643	Ignore	0.09	9.51e-07
3423	12.643	Ignore	0.09	9.39e-07
3426	12.644	Ignore	0.089	9.28e-07
3429	12.644	Ignore	0.089	9.17e-07
3432	12.646	Ignore	0.087	9.06e-07
3435	12.643	Ignore	0.09	8.96e-07
3438	12.645	Ignore	0.088	8.85e-07
3441	12.647	Ignore	0.086	8.74e-07
3444	12.645	Ignore	0.088	8.64e-07
3447	12.646	Ignore	0.087	8.54e-07
3450	12.646	Ignore	0.087	8.44e-07
3453	12.645	Ignore	0.088	8.34e-07
3456	12.643	Ignore	0.09	8.24e-07
3459	12.645	Ignore	0.088	8.14e-07
3462	12.645	Ignore	0.088	8.04e-07
3465	12.644	Ignore	0.089	7.95e-07
3468	12.644	Ignore	0.089	7.85e-07
3471	12.645	Ignore	0.088	7.76e-07
3474	12.643	Ignore	0.09	7.67e-07
3477	12.644	Ignore	0.089	7.58e-07
3480	12.644	Ignore	0.089	7.49e-07
3483	12.644	Ignore	0.089	7.40e-07
3486	12.643	Ignore	0.09	7.31e-07
3489	12.641	Ignore	0.092	7.23e-07
3492	12.643	Ignore	0.09	7.14e-07
3495	12.642	Ignore	0.091	7.06e-07
3498	12.642	Ignore	0.091	6.97e-07
3501	12.641	Ignore	0.092	6.89e-07
3504	12.642	Ignore	0.091	6.81e-07
3507	12.641	Ignore	0.092	6.73e-07
3510	12.643	Ignore	0.09	6.65e-07
3513	12.641	Ignore	0.092	6.57e-07
3516	12.642	Ignore	0.091	6.49e-07
3519	12.642	Ignore	0.091	6.41e-07
3522	12.64	Ignore	0.093	6.34e-07
3525	12.64	Ignore	0.093	6.26e-07
3528	12.641	Ignore	0.092	6.19e-07
3531	12.639	Ignore	0.094	6.12e-07
3534	12.641	Ignore	0.092	6.04e-07
3537	12.643	Ignore	0.09	5.97e-07
3540	12.641	Ignore	0.092	5.90e-07
3543	12.642	Ignore	0.091	5.83e-07
3546	12.642	Ignore	0.091	5.76e-07
3549	12.642	Ignore	0.091	5.69e-07

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
3552	12.642	Ignore	0.091	5.63e-07
3555	12.642	Ignore	0.091	5.56e-07
3558	12.639	Ignore	0.094	5.49e-07
3561	12.639	Ignore	0.094	5.43e-07
3564	12.641	Ignore	0.092	5.36e-07
3567	12.638	Ignore	0.095	5.30e-07
3570	12.64	Ignore	0.093	5.24e-07
3573	12.638	Ignore	0.095	5.18e-07
3576	12.64	Ignore	0.093	5.11e-07
3579	12.64	Ignore	0.093	5.05e-07
3582	12.642	Ignore	0.091	4.99e-07
3585	12.642	Ignore	0.091	4.93e-07
3588	12.642	Ignore	0.091	4.88e-07
3591	12.64	Ignore	0.093	4.82e-07
3594	12.642	Ignore	0.091	4.76e-07
3597	12.641	Ignore	0.092	4.70e-07
3600	12.642	Ignore	0.091	4.65e-07
3603	12.641	Ignore	0.092	4.59e-07
3606	12.643	Ignore	0.09	4.54e-07
3609	12.643	Ignore	0.09	4.49e-07
3612	12.643	Ignore	0.09	4.43e-07
3615	12.641	Ignore	0.092	4.38e-07
3618	12.641	Ignore	0.092	4.33e-07
3621	12.64	Ignore	0.093	4.28e-07
3624	12.641	Ignore	0.092	4.23e-07
3627	12.64	Ignore	0.093	4.18e-07
3630	12.641	Ignore	0.092	4.13e-07
3633	12.641	Ignore	0.092	4.08e-07
3636	12.64	Ignore	0.093	4.03e-07
3639	12.64	Ignore	0.093	3.98e-07
3642	12.638	Ignore	0.095	3.93e-07
3645	12.64	Ignore	0.093	3.89e-07
3648	12.64	Ignore	0.093	3.84e-07
3651	12.638	Ignore	0.095	3.80e-07
3654	12.64	Ignore	0.093	3.75e-07
3657	12.64	Ignore	0.093	3.71e-07
3660	12.64	Ignore	0.093	3.66e-07
3663	12.64	Ignore	0.093	3.62e-07
3666	12.64	Ignore	0.093	3.58e-07
3669	12.64	Ignore	0.093	3.53e-07
3672	12.639	Ignore	0.094	3.49e-07
3675	12.639	Ignore	0.094	3.45e-07
3678	12.639	Ignore	0.094	3.41e-07
3681	12.639	Ignore	0.094	3.37e-07
3684	12.641	Ignore	0.092	3.33e-07
3687	12.641	Ignore	0.092	3.29e-07
3690	12.641	Ignore	0.092	3.25e-07
3693	12.641	Ignore	0.092	3.21e-07
3696	12.643	Ignore	0.09	3.17e-07
3699	12.639	Ignore	0.094	3.14e-07
3702	12.641	Ignore	0.092	3.10e-07
3705	12.641	Ignore	0.092	3.06e-07
3708	12.643	Ignore	0.09	3.03e-07
3711	12.643	Ignore	0.09	2.99e-07

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
3714	12.641	Ignore	0.092	2.96e-07
3717	12.641	Ignore	0.092	2.92e-07
3720	12.641	Ignore	0.092	2.89e-07
3723	12.641	Ignore	0.092	2.85e-07
3726	12.641	Ignore	0.092	2.82e-07
3729	12.64	Ignore	0.093	2.78e-07
3732	12.641	Ignore	0.092	2.75e-07
3735	12.641	Ignore	0.092	2.72e-07
3738	12.639	Ignore	0.094	2.69e-07
3741	12.64	Ignore	0.093	2.65e-07
3744	12.641	Ignore	0.092	2.62e-07
3747	12.64	Ignore	0.093	2.59e-07
3750	12.641	Ignore	0.092	2.56e-07
3753	12.641	Ignore	0.092	2.53e-07
3756	12.641	Ignore	0.092	2.50e-07
3759	12.641	Ignore	0.092	2.47e-07
3762	12.641	Ignore	0.092	2.44e-07
3765	12.643	Ignore	0.09	2.41e-07
3768	12.641	Ignore	0.092	2.38e-07
3771	12.641	Ignore	0.092	2.36e-07
3774	12.641	Ignore	0.092	2.33e-07
3777	12.641	Ignore	0.092	2.30e-07
3780	12.64	Ignore	0.093	2.27e-07
3783	12.64	Ignore	0.093	2.25e-07
3786	12.641	Ignore	0.092	2.22e-07
3789	12.641	Ignore	0.092	2.19e-07
3792	12.642	Ignore	0.091	2.17e-07
3795	12.64	Ignore	0.093	2.14e-07
3798	12.642	Ignore	0.091	2.12e-07
3801	12.64	Ignore	0.093	2.09e-07
3804	12.64	Ignore	0.093	2.07e-07
3807	12.64	Ignore	0.093	2.04e-07
3810	12.64	Ignore	0.093	2.02e-07
3813	12.642	Ignore	0.091	1.99e-07
3816	12.64	Ignore	0.093	1.97e-07
3819	12.64	Ignore	0.093	1.95e-07
3822	12.639	Ignore	0.094	1.92e-07
3825	12.639	Ignore	0.094	1.90e-07
3828	12.642	Ignore	0.091	1.88e-07
3831	12.641	Ignore	0.092	1.86e-07
3834	12.641	Ignore	0.092	1.83e-07
3837	12.639	Ignore	0.094	1.81e-07
3840	12.644	Ignore	0.089	1.79e-07
3843	12.643	Ignore	0.09	1.77e-07
3846	12.641	Ignore	0.092	1.75e-07
3849	12.641	Ignore	0.092	1.73e-07
3852	12.639	Ignore	0.094	1.71e-07
3855	12.641	Ignore	0.092	1.69e-07
3858	12.641	Ignore	0.092	1.67e-07
3861	12.64	Ignore	0.093	1.65e-07
3864	12.64	Ignore	0.093	1.63e-07
3867	12.641	Ignore	0.092	1.61e-07
3870	12.638	Ignore	0.095	1.59e-07
3873	12.641	Ignore	0.092	1.57e-07

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
3876	12.641	Ignore	0.092	1.55e-07
3879	12.64	Ignore	0.093	1.53e-07
3882	12.641	Ignore	0.092	1.52e-07
3885	12.64	Ignore	0.093	1.50e-07
3888	12.638	Ignore	0.095	1.48e-07
3891	12.638	Ignore	0.095	1.46e-07
3894	12.641	Ignore	0.092	1.45e-07
3897	12.638	Ignore	0.095	1.43e-07
3900	12.64	Ignore	0.093	1.41e-07
3903	12.642	Ignore	0.091	1.39e-07
3906	12.638	Ignore	0.095	1.38e-07
3909	12.641	Ignore	0.092	1.36e-07
3912	12.638	Ignore	0.095	1.35e-07
3915	12.64	Ignore	0.093	1.33e-07
3918	12.638	Ignore	0.095	1.31e-07
3921	12.64	Ignore	0.093	1.30e-07
3924	12.64	Ignore	0.093	1.28e-07
3927	12.64	Ignore	0.093	1.27e-07
3930	12.641	Ignore	0.092	1.25e-07
3933	12.641	Ignore	0.092	1.24e-07
3936	12.64	Ignore	0.093	1.22e-07
3939	12.64	Ignore	0.093	1.21e-07
3942	12.64	Ignore	0.093	1.19e-07
3945	12.638	Ignore	0.095	1.18e-07
3948	12.64	Ignore	0.093	1.17e-07
3951	12.64	Ignore	0.093	1.15e-07
3954	12.641	Ignore	0.092	1.14e-07
3957	12.639	Ignore	0.094	1.13e-07
3960	12.638	Ignore	0.095	1.11e-07
3963	12.641	Ignore	0.092	1.10e-07
3966	12.639	Ignore	0.094	1.09e-07
3969	12.639	Ignore	0.094	1.07e-07
3972	12.639	Ignore	0.094	1.06e-07
3975	12.641	Ignore	0.092	1.05e-07
3978	12.641	Ignore	0.092	1.04e-07
3981	12.641	Ignore	0.092	1.02e-07
3984	12.639	Ignore	0.094	1.01e-07
3987	12.641	Ignore	0.092	9.99e-08
3990	12.639	Ignore	0.094	9.87e-08
3993	12.641	Ignore	0.092	9.75e-08
3996	12.641	Ignore	0.092	9.64e-08
3999	12.639	Ignore	0.094	9.52e-08
4002	12.641	Ignore	0.092	9.41e-08
4005	12.639	Ignore	0.094	9.30e-08
4008	12.641	Ignore	0.092	9.19e-08
4011	12.639	Ignore	0.094	9.08e-08
4014	12.639	Ignore	0.094	8.97e-08
4017	12.641	Ignore	0.092	8.87e-08
4020	12.639	Ignore	0.094	8.76e-08
4023	12.639	Ignore	0.094	8.66e-08
4026	12.641	Ignore	0.092	8.55e-08
4029	12.641	Ignore	0.092	8.45e-08
4032	12.639	Ignore	0.094	8.35e-08
4035	12.643	Ignore	0.09	8.25e-08

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
4038	12.641	Ignore	0.092	8.16e-08
4041	12.643	Ignore	0.09	8.06e-08
4044	12.643	Ignore	0.09	7.96e-08
4047	12.641	Ignore	0.092	7.87e-08
4050	12.642	Ignore	0.091	7.78e-08
4053	12.642	Ignore	0.091	7.68e-08
4056	12.644	Ignore	0.089	7.59e-08
4059	12.641	Ignore	0.092	7.50e-08
4062	12.642	Ignore	0.091	7.41e-08
4065	12.64	Ignore	0.093	7.33e-08
4068	12.642	Ignore	0.091	7.24e-08
4071	12.64	Ignore	0.093	7.15e-08
4074	12.64	Ignore	0.093	7.07e-08
4077	12.642	Ignore	0.091	6.99e-08
4080	12.64	Ignore	0.093	6.90e-08
4083	12.64	Ignore	0.093	6.82e-08
4086	12.64	Ignore	0.093	6.74e-08
4089	12.642	Ignore	0.091	6.66e-08
4092	12.642	Ignore	0.091	6.58e-08
4095	12.643	Ignore	0.09	6.50e-08
4098	12.642	Ignore	0.091	6.43e-08
4101	12.642	Ignore	0.091	6.35e-08
4104	12.642	Ignore	0.091	6.27e-08
4107	12.642	Ignore	0.091	6.20e-08
4110	12.64	Ignore	0.093	6.13e-08
4113	12.643	Ignore	0.09	6.05e-08
4116	12.642	Ignore	0.091	5.98e-08
4119	12.642	Ignore	0.091	5.91e-08
4122	12.642	Ignore	0.091	5.84e-08
4125	12.64	Ignore	0.093	5.77e-08
4128	12.64	Ignore	0.093	5.70e-08
4131	12.642	Ignore	0.091	5.64e-08
4134	12.642	Ignore	0.091	5.57e-08
4137	12.642	Ignore	0.091	5.50e-08
4140	12.64	Ignore	0.093	5.44e-08
4143	12.638	Ignore	0.095	5.37e-08
4146	12.642	Ignore	0.091	5.31e-08
4149	12.642	Ignore	0.091	5.25e-08
4152	12.642	Ignore	0.091	5.19e-08
4155	12.64	Ignore	0.093	5.12e-08
4158	12.642	Ignore	0.091	5.06e-08
4161	12.642	Ignore	0.091	5.00e-08
4164	12.639	Ignore	0.094	4.94e-08
4167	12.639	Ignore	0.094	4.89e-08
4170	12.64	Ignore	0.093	4.83e-08
4173	12.642	Ignore	0.091	4.77e-08
4176	12.642	Ignore	0.091	4.71e-08
4179	12.644	Ignore	0.089	4.66e-08
4182	12.642	Ignore	0.091	4.60e-08
4185	12.64	Ignore	0.093	4.55e-08
4188	12.642	Ignore	0.091	4.49e-08
4191	12.642	Ignore	0.091	4.44e-08
4194	12.641	Ignore	0.092	4.39e-08
4197	12.641	Ignore	0.092	4.34e-08

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
4200	12.642	Ignore	0.091	4.28e-08
4203	12.644	Ignore	0.089	4.23e-08
4206	12.641	Ignore	0.092	4.18e-08
4209	12.642	Ignore	0.091	4.13e-08
4212	12.641	Ignore	0.092	4.09e-08
4215	12.642	Ignore	0.091	4.04e-08
4218	12.644	Ignore	0.089	3.99e-08
4221	12.644	Ignore	0.089	3.94e-08
4224	12.642	Ignore	0.091	3.90e-08
4227	12.642	Ignore	0.091	3.85e-08
4230	12.639	Ignore	0.094	3.80e-08
4233	12.641	Ignore	0.092	3.76e-08
4236	12.644	Ignore	0.089	3.71e-08
4239	12.642	Ignore	0.091	3.67e-08
4242	12.642	Ignore	0.091	3.63e-08
4245	12.642	Ignore	0.091	3.58e-08
4248	12.644	Ignore	0.089	3.54e-08
4251	12.641	Ignore	0.092	3.50e-08
4254	12.643	Ignore	0.09	3.46e-08
4257	12.639	Ignore	0.094	3.42e-08
4260	12.643	Ignore	0.09	3.38e-08
4263	12.641	Ignore	0.092	3.34e-08
4266	12.643	Ignore	0.09	3.30e-08
4269	12.643	Ignore	0.09	3.26e-08
4272	12.641	Ignore	0.092	3.22e-08
4275	12.641	Ignore	0.092	3.18e-08
4278	12.643	Ignore	0.09	3.14e-08
4281	12.643	Ignore	0.09	3.11e-08
4284	12.643	Ignore	0.09	3.07e-08
4287	12.643	Ignore	0.09	3.03e-08
4290	12.643	Ignore	0.09	3.00e-08
4293	12.641	Ignore	0.092	2.96e-08
4296	12.641	Ignore	0.092	2.93e-08
4299	12.641	Ignore	0.092	2.89e-08
4302	12.641	Ignore	0.092	2.86e-08
4305	12.643	Ignore	0.09	2.82e-08
4308	12.643	Ignore	0.09	2.79e-08
4311	12.643	Ignore	0.09	2.76e-08
4314	12.641	Ignore	0.092	2.72e-08
4317	12.642	Ignore	0.091	2.69e-08
4320	12.642	Ignore	0.091	2.66e-08
4323	12.642	Ignore	0.091	2.63e-08
4326	12.642	Ignore	0.091	2.60e-08
4329	12.644	Ignore	0.089	2.57e-08
4332	12.641	Ignore	0.092	2.54e-08
4335	12.642	Ignore	0.091	2.51e-08
4338	12.641	Ignore	0.092	2.48e-08
4341	12.642	Ignore	0.091	2.45e-08
4344	12.642	Ignore	0.091	2.42e-08
4347	12.641	Ignore	0.092	2.39e-08
4350	12.641	Ignore	0.092	2.36e-08
4353	12.644	Ignore	0.089	2.33e-08
4356	12.642	Ignore	0.091	2.31e-08
4359	12.641	Ignore	0.092	2.28e-08

Time (sec)	Recovery:H(ft)	Fit Criteria	Y(ft)	Fit Y(ft)
4362	12.642	Ignore	0.091	2.25e-08
4365	12.641	Ignore	0.092	2.22e-08
4368	12.641	Ignore	0.092	2.20e-08
4371	12.642	Ignore	0.091	2.17e-08
4374	12.644	Ignore	0.089	2.15e-08
4377	12.64	Ignore	0.093	2.12e-08
4380	12.642	Ignore	0.091	2.10e-08
4383	12.641	Ignore	0.092	2.07e-08
4386	12.642	Ignore	0.091	2.05e-08
4389	12.642	Ignore	0.091	2.02e-08
4392	12.642	Ignore	0.091	2.00e-08
4395	12.641	Ignore	0.092	1.97e-08
4398	12.642	Ignore	0.091	1.95e-08
4401	12.641	Ignore	0.092	1.93e-08
4404	12.642	Ignore	0.091	1.91e-08
4407	12.64	Ignore	0.093	1.88e-08
4410	12.642	Ignore	0.091	1.86e-08
4413	12.642	Ignore	0.091	1.84e-08
4416	12.64	Ignore	0.093	1.82e-08
4419	12.64	Ignore	0.093	1.79e-08
4422	12.64	Ignore	0.093	1.77e-08
4425	12.639	Ignore	0.094	1.75e-08
4428	12.64	Ignore	0.093	1.73e-08
4431	12.64	Ignore	0.093	1.71e-08
4434	12.64	Ignore	0.093	1.69e-08
4437	12.642	Ignore	0.091	1.67e-08
4440	12.64	Ignore	0.093	1.65e-08
4443	12.64	Ignore	0.093	1.63e-08
4446	12.638	Ignore	0.095	1.61e-08
4449	12.64	Ignore	0.093	1.59e-08
4452	12.64	Ignore	0.093	1.57e-08
4455	12.64	Ignore	0.093	1.56e-08
4458	12.638	Ignore	0.095	1.54e-08
4461	12.642	Ignore	0.091	1.52e-08
4464	12.64	Ignore	0.093	1.50e-08
4467	12.64	Ignore	0.093	1.48e-08
4470	12.64	Ignore	0.093	1.47e-08
4473	12.64	Ignore	0.093	1.45e-08
4476	12.64	Ignore	0.093	1.43e-08
4479	12.641	Ignore	0.092	1.41e-08
4482	12.641	Ignore	0.092	1.40e-08
4485	12.641	Ignore	0.092	1.38e-08
4488	12.643	Ignore	0.09	1.36e-08
4491	12.64	Ignore	0.093	1.35e-08
4494	12.64	Ignore	0.093	1.33e-08
4497	12.641	Ignore	0.092	1.32e-08
4500	12.643	Ignore	0.09	1.30e-08
4503	12.641	Ignore	0.092	1.29e-08
4506	12.636	Ignore	0.097	1.27e-08
4509	12.643	Ignore	0.09	1.26e-08
4512	12.641	Ignore	0.092	1.24e-08

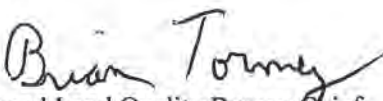
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SITE-SPECIFIC ADDENDUM
for the
GENERIC
CONTAMINATED SITES SECTION
QUALITY ASSURANCE PROJECT PLAN

PROJECT INFORMATION:

Site Name: Sunshine Laundry	Project Manager: Hylton Jackson
City: Fort Dodge	County: Webster

APPROVALS:

Brian Tormey 
IDNR, Energy and Land Quality Bureau Chief
Bureau QA Officer

Date 11/30/10

Cal Lundberg 
IDNR, Contaminated Sites Supervisor

Date 11/24/10

1. PROJECT MANAGEMENT

Distribution List

Project Manager: Hylton Jackson
Field Personnel: Greg Fuhrmann, Matt Culp, Tami Rice, Dan Cook, John Woodland
Contaminated Sites Section Supervisor: Cal Lundberg
Iowa Geological Survey and Land Quality Bureau Chief: Brian Tormey

Project /Task Organization

IDNR Project Manager:
Hylton Jackson

IDNR QA Officer:
Hylton Jackson

1.3 Problem Definition/Background

This is the site-specific addendum for the generic *Quality Assurance Project Plan for the IDNR Iowa Geological Survey and Land Quality Bureau Contaminated Sites Section*, dated May 2000. This addendum describes the specific sampling activities for the site described below.

Site Location and Size:

The Wells Fargo property is located at 42.5015 north latitude and 94.1635 west longitude in Webster County, Iowa. The Wells Fargo property can also be defined as the one-acre lot occupied by a building and associated parking located in a commercially developed area of eastern Fort Dodge, Iowa and:

- North of 5th Avenue South/U.S Business 20
- West of South 25th Street
- East of Sunshine Laundry

See Attachment A, Figure 1, Site Location

Important Physical Features:

The site is located in the Des Moines lobe of the Wisconsin glaciated area of north central Iowa. Logs from past borings/monitoring wells borings installed on the neighboring Sunshine Laundry property (maximum depth of 29 feet bgs) indicate that silty clay is present from surface to the bottom of boring at most locations. This glacial deposit can include, thin sand seams, and trace amounts of sand, gravel, and small pebbles. Some sand fill was noted at one location. Hydraulic conductivity tests run on three Sunshine Laundry monitoring wells returned values of:

- MW-1: 0.548 m/day
- MW-3: 0.481 m/day
- MW-4: 0.193 m/day

The site is 1 ¼ miles northeast of the Des Moines River and outside of the source water protection area for the City of Fort Dodge

Chronological Site History:

A Phase I was conducted for the Sunshine Laundry property located at 2422 5th Avenue South, Fort Dodge, Iowa in January of 2008. The Phase I was commissioned by the Nestle Purina Pet Care Company. It was determined that dry cleaning operations had been previously performed onsite. In March, 2008, soil and groundwater samples were collected from ten locations (DP-1 through DP-10) on the Sunshine property. Two permanent sub-slab vapor sampling probes were installed beneath the existing building floor. Soil, soil vapor, and groundwater samples were analyzed for VOCs. This Phase II environmental assessment (also commissioned by the Nestle Purina Pet Care Company) detected soil, soil vapor, and groundwater contaminated with chlorinated solvents that exceeded the respective Statewide Standard. The Phase II results were submitted to the Department in May of 2008 for review. The extent of the contamination had not been defined and the Department required an additional environmental assessment in a June 16, 2008 letter.

A work plan was presented to the Department on July 22, 2009 and approved on July 23, 2009. The work plan and site assessment were commissioned by Jyoti Raval, current site owner. Six borings were advanced onsite. Four borings, MW-1 through MW-4, were completed on January 18th and 19th, 2010, all terminating at 20 feet bgs. Two borings, MW-5 to 10 feet bgs and MW-6 to 14 feet bgs, were completed on April 22, 2010. All borings were converted to flush-mount monitoring wells. Soil (no soil sample from MW-4 and MW-5) and groundwater samples were collected and analyzed for chlorinated solvents and breakdown products. The results were presented in a report (dated June 2010) that was submitted to the Department for review. Unfortunately, the additional assessment failed to define the extent of the groundwater contamination. The June 2010 report also presents the possibility of offsite migration of the groundwater plume.

The current property owner, Ms. Jyoti Raval of Sunshine Company, LC, is not suspected to be the party responsible for the release. Evidence has been found in the records that indicate the previous owner, Eugene Hiskey, was the operator of a dry cleaning service when the release occurred (sometime prior to 1992). The Department's legal staff has determined that Mr. Hiskey does not have the financial resources required to conduct the environmental activities that would be necessary to define the extent of the groundwater contamination. Since there is no viable responsible party, it has been determined that the Department will conduct an additional, limited environmental assessment in an attempt to establish the extent of the contaminated groundwater.

A summary of the chlorinated solvent contaminants detected in soil and groundwater to date are presented in the following tables. Sample locations are indicated on Attachment A, Figure 2

TABLE 1

Soil Sample Results
Concentrations in mg/kg. Exceedances of Statewide Standard in **bold**

Sample ID	Analyte					
	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,2-DCE	Vinyl Chloride
DP-1	0.319	0.008	0.0106	ND	ND	ND
DP-2	0.034	ND	ND	ND	ND	ND
DP-3	ND	ND	ND	ND	ND	ND
DP-4	1.850	ND	ND	ND	ND	ND
DP-5	0.0167	ND	ND	ND	ND	ND
DP-6	0.291	ND	ND	ND	ND	ND
DP-7	ND	ND	ND	ND	ND	ND
DP-8	0.262	0.0105	0.0148	ND	ND	ND
DP-9	22.1	0.052	ND	ND	ND	ND
DP-10	ND	ND	ND	ND	ND	ND
MW-1	ND	ND	ND	ND	NA	ND
MW-2	0.028	0.003	0.006	ND	NA	ND
MW-3	ND	ND	0.01	0.01	NA	ND
MW-6	0.043	0.063	0.018	0.027	NA	ND
SS ¹	5.7	7.7	760	1,500	34	2.1

¹ Statewide Standard

ND Compound not detected above detection limit

NA Non-Applicable

TABLE 2

Groundwater Samples
Concentrations in mg/L. Exceedances of Statewide Standard in **bold**

Sample ID	Analyte					
	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,2-DCE	Vinyl Chloride
DP-1	0.012	ND	ND	ND	ND	ND
DP-2	0.034	ND	ND	ND	ND	ND
DP-3	0.0664	ND	ND	ND	ND	ND
DP-4	0.190	ND	0.0243	0.0021	0.0264	ND
DP-5	0.0248	ND	ND	ND	ND	ND
DP-6	1.040	0.0379	0.0070	ND	0.0070	ND
DP-7	0.511	ND	ND	ND	ND	ND
DP-8	0.178	0.103	0.302	0.139	0.440	0.0023
DP-9	2.140	0.0048	0.0069	0.0030	0.0099	ND
DP-10	ND	ND	ND	ND	ND	ND
MW-1	0.0028	0.006	0.0201	0.0037	ND	ND
MW-2	0.0578	0.0108	0.0468	0.0137	ND	ND
MW-3	1.97	0.281	1.11	0.518	ND	0.0062
MW-4	0.0073	0.0011	0.0029	0.0014	ND	ND
MW-5	0.111	0.0045	ND	ND	ND	ND
MW-6	0.0753	0.0051	0.0035	0.0025	ND	ND
SS ¹	0.005	0.005	0.070	0.100	0.005	0.002

¹ Statewide Standard for Protected Groundwater
ND Compound not detected above detection limit

1.4 Project/Task Description

Phase of Work: ☐ ISS ☒ ESS ☐ PA ☐ PA/SI ☐ PA/SI RSE

Schedule:

Field work is tentatively scheduled for December 14th and/or 15th, 2010. Access permission to the Wells Fargo property was obtained via email from Rick L Davis, Property Manager, Wells Fargo Bank. Access permission for the Sunshine Laundry property will be sought before sampling activities are initiated. Proposed sample locations will be flagged prior to Iowa One-Call notification. (See Attachment A, Figure 2, Sample Location Map).

Quality Objectives and Criteria for Measurement Data

Per the Generic QAPP: ☒ Yes ☐ No (Describe below)
Other:

Special Training

Per the Generic QAPP.

Documentation and Records

Per the Generic QAPP.

2. MEASUREMENT AND DATA ACQUISITION

2.1 Sampling Process Design

Description of Sampling Design:

The sampling results from the 16 borings/monitoring wells advanced during the previous site assessments of Sunshine Laundry have defined the northern, western, and southwestern extent of the chlorinated groundwater plume. Three additional sampling points (WF-1 through WF-3) are proposed for this limited environmental site assessment of the neighboring Wells Fargo property. These three borings will be advanced to a depth of 20 feet bgs using the Department's Geoprobe. A groundwater sample will be collected from each boring using the Geoprobe screen point 15. The six existing wells (MW-1 through MW-6) located on the Sunshine Laundry property will also be resampled during this assessment. All nine groundwater samples will be analyzed for chlorinated solvents* and the breakdown products.

2.2 Sample Methods Requirements

Matrix	Sampling Method
Groundwater	Geoprobe® screen point (WF-1 through WF-3)
Groundwater	PVC Monitoring Wells (MW-1 through MW-6)

2.3 Sample Handling and Custody Requirements

Per the Generic QAPP.
Analytical Methods Requirements

Media Sampled	Analytical Parameter	Analytical Method	Sample Container	Sample Preservation	Special Handling
Groundwater	Chlorinated Solvents*	EPA 8260	3-40 ml glass vials per location	0.5 ml. HCL	Cool 4 C

*Chlorinated solvents will include tetrachloroethene, trichloroethene, trans-1,2-dichloroethene, cis-1,2-dichloroethene, and vinyl chloride,

Quality Control Requirements

QC Sample	Number to be Collected	Location(s)
<i>Groundwater- Field Duplicate</i>	<i>1</i>	<i>Duplicate from selected screen point 15 location</i>
<i>Groundwater- Trip Blank</i>	<i>1</i>	<i>Supplied by SHL</i>

Instrument/Equipment Testing, Inspection, and Maintenance Requirements

Per the Generic QAPP.

Inspection/Acceptance Requirements for Supplies and Consumables

Per the Generic QAPP.

Data Acquisition Requirements

Per the Generic QAPP.

Data Management

Per the Generic QAPP.

ASSESSMENT/OVERSIGHT

All assessment and oversight activities are in accordance with the Generic QAPP.

DATA VALIDATION AND USABILITY

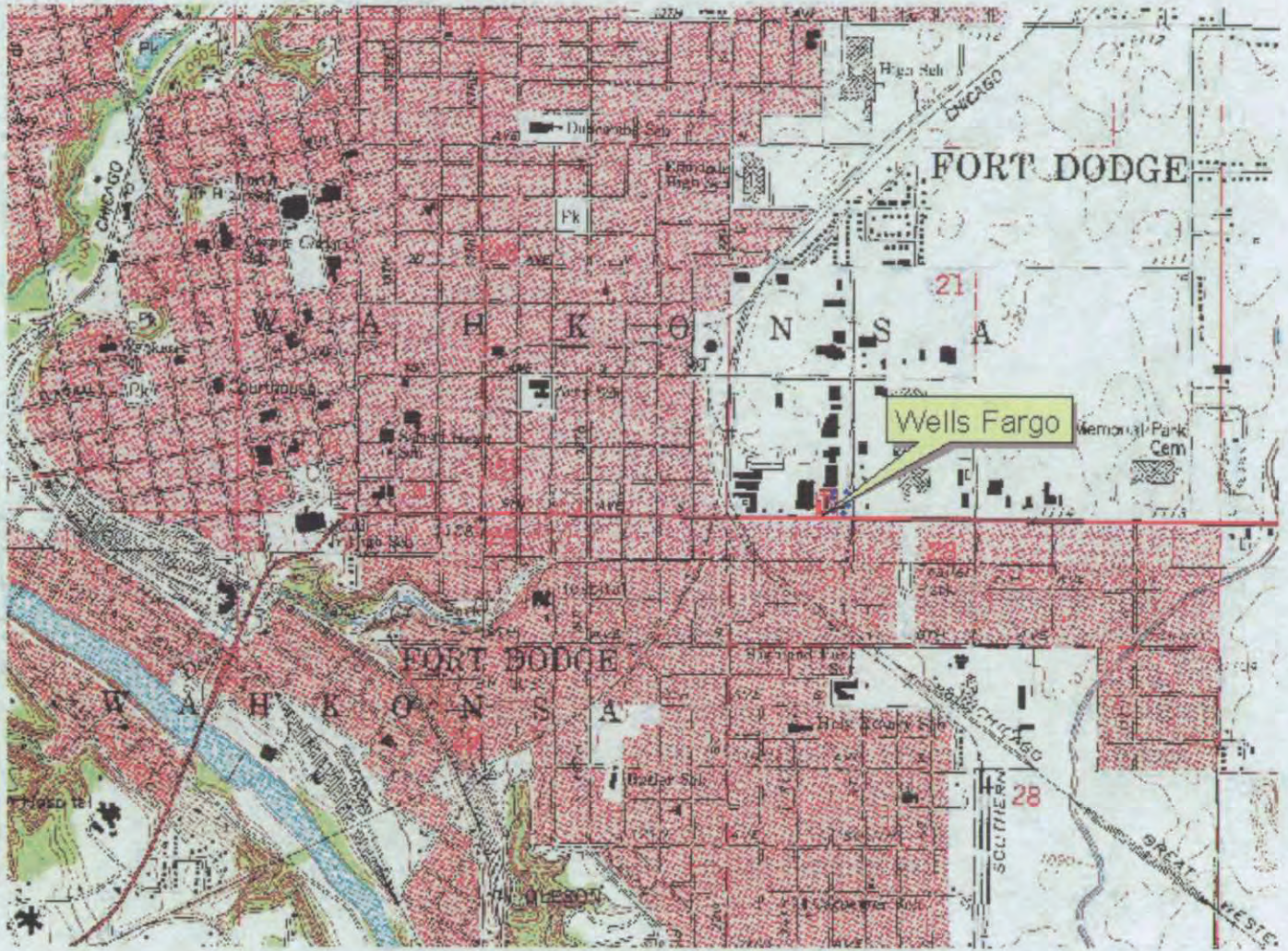
All data validation will be in accordance with the Generic QAPP.

Attachment A Figures

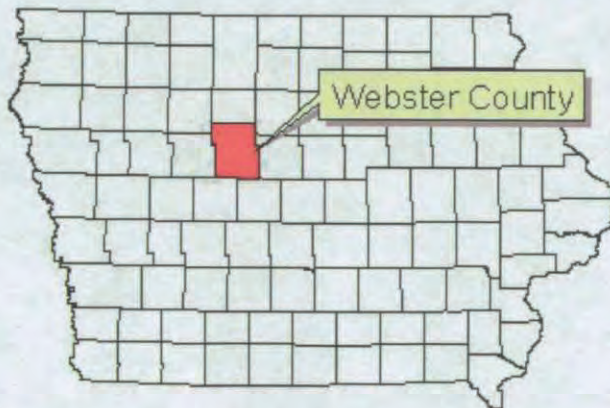
Figure 1
Site Location

Figure 2
Sample Locations

Attachment A, Figure 1 Site Location



0.6 0 0.6 1.2 Miles



Attachment A, Figure 2 Sample Locations



Site Name: Sunshine Laundry, Fort Dodge

Extended Site Screening (ESS)

Project Manager: Hylton Jackson

Date: July 16, 2012

**CON 12-15
Doc # 27272**

Summarize the site history (past usages, past ownerships, wastes, known or suspected contamination pathways such as tanks, septic tank/tile field, lagoon, land applications, S.W. burial, etc)

The site was a former dry cleaning facility which operated for approximately eight years. Dry cleaning operations had ceased by the time the property was sold to the current owners (1994). The Phase II referenced EPA documents (dated 1992) that indicated waste containers of tetrachloroethene (PCE) stored in the shed on northern portion of the site had leaked on some occasions. No other reference to site history was provided.

Briefly describe the site assessment that was conducted (number of borings, monitoring wells, number of samples, depth of soil samples and monitoring wells, analysis, etc.)

As a result of the information obtained in the Phase I report, a soil and groundwater Phase II Environmental Site Assessment (dated April 15, 2008) was performed by Burns and McDonnell Engineering Company, Inc. Ten borings (DP-1 through DP-10) were advanced to depths from 20 to 26 feet below ground surface (bgs). A soil sample was collected from each boring after field screening for organic vapors using a photo ionization detector (PID). All ten soil samples were analyzed for volatile organic compounds (VOCs). A groundwater sample was collected from each boring and analyzed for VOCs. Two sub-slab vapor samples (SVP-1 and SPV-2) were collected below the slab of the main building. The soil vapor samples were analyzed for BTEX, PCE, TCE, chloroform, methylene chloride, and vinyl chloride. Results from this assessment indicated that soil and groundwater had been significantly impacted by the past release of PCE.

The Department required an additional assessment and the environmental consultants, Barker Lemar, conducted a Site Assessment and prepared a Remedial Action Plan (report dated June 2010). Six borings (MW-1 through MW-6) had been advanced onsite to depths from 10 to 20 feet bgs and each was converted to a permanent monitoring well. A soil sample was collected from borings MW-1, MW-2, MW-3, and MW-6 after field screening for organic vapors using a photo ionization detector (PID). All four soil samples were analyzed for PCE; TCE; cis-1,2-DCE; trans-1,2-DCE; and Vinyl Chloride. A groundwater sample was collected from each of the six permanent monitoring wells and analyzed for PCE; TCE; cis-1,2-DCE; trans-1,2-DCE; and Vinyl Chloride. The Barker Lemar site assessment did not fully define the extent of the chlorinated groundwater plume.

The Department obtained access permission from the Wells Fargo property that lies directly east of the Sunshine Laundry property. On December 6, 2010, the Department advanced three Geoprobe® screenpoint borings to depths of 15 to 19 feet bgs in the Wells Fargo parking lot and a groundwater sample was collected from each boring. Groundwater samples were also collected from five of the six permanent wells on the Sunshine laundry property. Monitoring well MW-3 could not be located. All groundwater samples were analyzed for PCE; TCE; cis-1,2-DCE; trans-1,2-DCE; and Vinyl Chloride.

For the last round of assessment activities, conducted on May 18, 2011, the Department obtained access permission for the Long John Silver's property that lies east of South 25th Street and east of the Wells Fargo property. Four Geoprobe® screenpoint borings were advanced to depths of 15 to 19 feet bgs on the Long John Silver's property. A groundwater sample was collected from two borings, PS-1 and PS-2. Borings PS-3 and PS-4 did not yield water. Groundwater samples were also collected from the six permanent wells on the Sunshine Laundry property. All groundwater samples were analyzed for PCE; TCE; 1,2-DCE (total); and Vinyl Chloride.

On December 19, 2011 the Department collected one last round of groundwater samples from the six permanent monitoring wells that remain on the Sunshine Laundry property. The groundwater samples were analyzed for PCE; TCE; cis-1,2-DCE; trans-1,2-DCE; and vinyl chloride.

Summarize the findings and conclusions regarding the contaminants found and their extent and concentrations. Relate those values to known criteria such as statewide standards, MCLs, water quality standards, background levels or other benchmarks used to determine site priority.

Soil: 4/15/2008 Phase II by Burns and McDonnell Engineering Company, Inc

PCE was detected in one soil sample above Statewide Standard. TCE, cis-1,2-DCE, trans-1,2-DCE, and 1,2-DCE were detected in one or more soil samples below their applicable Statewide Standard. No other soil contaminants were detected above laboratory detection limits. See Table below.

All units in mg/kg. Exceedances in **Bold**

Sample Location	Contaminant (mg/kg)				
	PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	1,2-DCE
DP-1 (Dup)	0.319	0.008	0.0106	ND	0.0135
DP-2	0.034	ND	ND	ND	ND
DP-3	ND	ND	ND	ND	ND
DP-4	1.850	ND	ND	ND	ND
DP-5	0.0167	ND	ND	ND	ND
DP-6	0.291	ND	ND	ND	ND
DP-7	ND	ND	ND	ND	ND
DP-8	0.262	0.0105	0.0148	ND	0.0194
DP-9	22.1	0.052	ND	ND	ND
DP-10	ND	ND	ND	ND	ND
Statewide Standard	5.7	7.7	760	1500	34

ND - Compound not detected above laboratory detection limits

Groundwater: 4/15/2008 Phase II by Burns and McDonnell Engineering Company, Inc

PCE; TCE; cis-1,2-DCE; trans-1,2-DCE; and VC were detected in one or more groundwater samples above their applicable Statewide Standard. No other groundwater contaminants were detected above the applicable Statewide Standard.

All units ug/l. Exceedances in **BOLD**

Sample Location	PCE	TCE	1,2-DCE	cis-1,2-DCE	trans-1,2-DCE	1,2,4-trimethyl benzene	VC	chloroethane
DP-1	12	ND	ND	ND	ND	ND	ND	ND
DP-2	34	ND	ND	ND	ND	ND	ND	ND
DP-3	66.4	ND	ND	ND	ND	ND	ND	ND
DP-4	190	ND	26.4	24.3	2.1	ND	ND	ND
DP-5	24.8	ND	ND	ND	ND	ND	ND	ND
DP-6	1,040	37.9	7.0	7.0	ND	ND	ND	ND
DP-7	511	ND	ND	ND	ND	ND	ND	ND
DP-8	178	103	440	302	139	ND	2.3	1.4
DP-9	2,140	4.8	9.9	6.9	3.0	1.3	ND	ND
DP-10	ND	ND	ND	ND	ND	ND	ND	ND
Statewide Standard*	5	5	5	70	100	350	2	NA

*Statewide Standard for Protected Groundwater

ND - Compound not detected above laboratory detection limits

Soil Vapor: 4/15/2008 Phase II by Burns and McDonnell Engineering Company, Inc

PCE; and m,p-xylene were detected in sub-slab vapor samples above the laboratory detection limits. The detection limit for sample # SVP-1/AR01 was 4.7 ug/m³. Due to a dilution factor, the detection limit for SPV-2/AR01 was 7,800 ug/m³. No other contaminants were detected above the detection limits. While there are no Statewide Standards for sub-slab soil vapors, the detected concentrations were converted to indoor air concentrations (using an attenuation factor of 0.1) and the results were entered into the Land Recycling Program (LRP) cumulative risk calculator. The site is not enrolled in the LRP and the use of the cumulative risk calculator to evaluate the detected contaminant concentrations does not infer that a risk assessment has been completed for this site. The results of the cumulative risk calculation are referenced here because it is the only method available to evaluate sub-slab soil vapor concentrations. See Table below for detected concentrations.

Concentrations that exceed the LRP cumulative risk calculator for site worker in **Bold**

Contaminant (ug/m ³)	Sample Number/Location	
	SVP-1/AR01*	SPV-2/AR01
PCE	170	630,000
m,p-x ylenes	4.9	ND

* Soil vapor sample SVP/AR01 failed the chemical leak test (helium) and the results are considered invalid.

PCE was detected in both sub-slab vapor samples at concentrations above the screening level of 67 ug/m^3 . SVP-1 was located in the utility room near the floor drain in the northeast portion of the facility and SVP-2 was located in the open area in the northwest portion of the facility. The calculated screening levels are based on the USEPA's 2002 *Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance)*. The sub-slab screening levels were developed by combining risk-based concentrations for indoor air with an attenuation factor to account for migration across a building slab. The indoor air screening levels were calculated based on a target cancer risk level of 1 in 100,000 ($1\text{E}-05$) or a noncancer hazard index of 0.1, whichever value is more protective (i.e., lower). The calculated risk-based concentrations for indoor air were adjusted by a factor of 0.1 to account for attenuation through the concrete slab. The attenuation factor of 0.1 represents the conservative default value provided in the EPA Guidance. The concentration of PCE at SVP-1 was 170 ug/m^3 and the concentration at SPV-2 was $630,000 \text{ ug/m}^3$. If the 10 per cent attenuation factor is used for the concentration of $630,000 \text{ ug/m}^3$ and the sample run through Department's LRP Cumulative Risk Calculator, that sample would grossly exceed all exposure scenarios (site resident, site worker, and construction worker). The site is not enrolled in the LRP program. m,p-Xylenes were also detected in the sub slab vapor sample at SVP-1 (4.9 ug/m^3 below the calculated screening level of 195 ug/m^3). Xylenes were not detected in any soil or groundwater samples collected onsite during the Burns and McDonnell Phase II. No ESS site investigation activities were directed at addressing the sub slab soil vapor conditions identified onsite during the Burns and McDonnell Phase II (2008).

Soil; June 2010, Site Assessment and Remedial Action Plan, by Barker Lemar and subsequent Department assessments.

No chlorinated solvent contamination was detected above its applicable Statewide Standard in any of the four soil samples submitted during the Barker Lemar assessment. During subsequent investigation activities, no other soil samples have been collected or analyzed.

Groundwater; Sampling data from June 2010, Site Assessment and Remedial Action Plan, by Barker Lemar and subsequent Department assessments.

All units in ug/l. Exceedances in **BOLD**

Sample Location	Date	PCE	TCE	trans-1,2-DCE	cis-1,2-DCE	Vinyl Chloride
MW-1	1/19/2010	2.8	6	3.7	20.1	ND
	12/6/2010	ND	7	ND	18	ND
	5/18/2011	ND	ND	ND	8	ND
	12/19/2011	ND	5	*	9*	
MW-2	1/19/2010	57.8	10.8	13.7	46.8	ND
	12/6/2010	350	89	85	400	ND
	5/18/2011	690	230	120	500	26
	12/19/2011	790	200	*	640*	67
MW-3	1/19/2010	1,970	281	518	1,110	6.2
	12/6/2010	NS	NS	NS	NS	NS
	5/18/2011	4,000	360	590	1,100	11
	12/19/2011	3700	420	*	1,500*	11
MW-4	1/19/2010	7.3	1.1	1.4	2.9	ND
	12/6/2010	22	ND	ND	ND	ND
	5/18/2011	ND	ND	ND	ND	ND
	12/19/2011	ND	ND	ND*	ND*	ND
MW-5	4/22/2010	111	4.5	ND	ND	ND
	12/6/2010	160	14	ND	ND	ND
	5/18/2011	160	20	ND	8	ND
	12/19/2011	190	13	ND*	ND*	ND
MW-6	4/22/2010	75.3	5.1	2.5	3.5	ND
	12/6/2010	100	17	10	33	ND
	5/18/2011	67	6	ND	8	ND
	12/19/2011	110	15	*	11*	ND
WF-1	12/6/2010	130	270	170	1,100	ND
WF-2	12/6/2010	400	210	180	430	ND
WF-3	12/6/2010	1,000	310	650	1,300	ND
PS-1	5/18/2011	ND	ND	ND	ND	ND
PS-2	5/18/2011	ND	ND	ND	ND	ND
Statewide Standard		5	5	100	70	2

*Concentrations of cis-1,2-DCE and trans-1,2-DCE were combined and reported as total 1,2-DCE in 12/19/2011 sampling event. This table lists that total concentration as cis-1,2-DCE, the compound with the lower Statewide Standard.

Identify on-site or off-site potential and actual targets (e.g., municipal wells, private wells, drinking water intakes). What is known of the neighboring area, i.e., are there residences, businesses, public use areas, etc.? Are there utility lines that could be impacted by site contaminants? Identify any other use/location issues that deserve consideration.

The site is located in a light industrial/commercial area on the east side of Fort Dodge. The nearest residence appears to be approximately 1,300 feet west of the site. Water service to the Sunshine Laundry is marked as a 2-inch copper line. Service line location and composition to the neighboring Wells Fargo property is unknown. The water main (along 5th Ave. South) is marked as 8-inch cast iron. Barker Lemar determined groundwater conductivity at three monitoring wells, MW-1 (0.548 m/day); MW-3 (0.481 m/day); and MW-4 (0.193 m/day). Groundwater flow direction is indicated to be to the northeast. The nearest well to the site is a private well 840 to the southwest – up gradient from the site. The site is 2,800 feet outside the source water protection zone for Fort Dodge's municipal system.

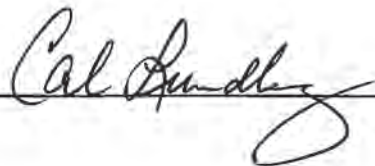
Summarize the reasoning, knowledge or any other information used in determining your response regarding your review of this site.

ESS site investigation activities were conducted in an attempt to determine the off site impact of the contaminated groundwater plume. These activities were partially driven by the pending intent to purchase the property, demolish the onsite building, and expand the parking lot of the neighboring Nestle Purina Pet Care Company facility to the west. Contaminated groundwater has been shown to extend offsite to the northeast impacting the parking lot north of the neighboring Wells Fargo Bank. Reduction is occurring at the leading edge of the plume. The plume does not appear to extend east of South 25th Street. Soil conditions and geographic settings would seem to indicate that further delineation of the groundwater plume would not be necessary at this time unless chlorinated concentrations prove to be increasing. With only four rounds of sampling to date, annual monitoring of the six permanent wells located on the Sunshine property is recommended. If possible, a soil gas sample collected at the northwest corner of the Wells Fargo building may also be warranted.

Site recommended for:

- ☐ No further action
- ☒ Additional investigation under state program (activity code 2824)
- ☐ Additional investigation by responsible party
- ☐ Transfer to LUST/UST

Form Reviewed:



Date Reviewed: 7/17/12



REGION VII U.S. EPA SUPERFUND
NO DISCOVERY DATE

PRE-CERCLIS INITIATION FORM

NPL Status = O-NOT A VALID SITE OR INCIDENT

Site Name: Sunshine Laundry, Fort Dodge

Identified By: _____

☐ Removal ☒ Site Assessment ☐ Federal Facilities ☐ States
☐ Other Federal Agency Check if: ☐ FUD Site

Address: 2422 5th Ave. S

County Name: Webster

City, State, Zip: Fort Dodge, IA 50501

State ID (if one exists): _____

Congressional District: 4

NPL Status: = : Not a Valid Site or Incident Federal Facility Indicator: ☐ Federal Facility ☒ Not a Federal Facility ☐ Status Undetermined

Section: ☐ C-(STAR) SPFD Technical Assistance/Re-Use Branch ☐ L-(EFLR) Enfr/Fund Lead RV Branch ☐ F-(FFSE) Federal Facilities/Special Emphasis Branch
☐ M-(MOKS) MO/KS remedial Branch ☒ I-(IANE) IA/NE Remedial Branch ☐ O-(ER&R) Emergency Response & RV Branch

List Site Alias Name (s): _____

Directions to Site: From U. S. 20 south of Fort Dodge, take the Quail Avenue exit, proceed 3.5 miles north. Turn west on Quail Avenue (5th Avenue South), proceed 1.75 miles west. Arrive at 2422 5th Avenue South on the right.

Site Description: Former Dry Cleaner

USGS Quadrant: Fort Dodge N 7.5'
main

USGS Hydro Unit: _____

Latitude: 42.503510 Longitude: 94.164003
(Decimal Degree format) (with release of 3.17 see attached required location data form)

Lat/Long Accuracy: ☒ Seconds ☐ Miles ☐ Feet
☐ Degrees ☐ Minutes ☐ Kilometers ☐ Meters

Owner ☐ Bank/Loan Company ☐ Municipality
Operator ☐ County Owned ☐ Other
Type ☐ District Owned ☒ Private
☐ Federally-Owned ☐ Mixed Ownership
☐ Former Federally Owned or Operated ☐ State Owned
☐ Former Federally Owned or Operated ☐ State Owned
☐ Government Owned/Contractor Operated ☐ Trustee, Federal
☐ Privately Owned/Government Operated ☐ Trustee, State
☐ Property Defaulted Back to Government ☐ Unknown
☐ Brownfields/Public

Operational Status: ☐ Active ☒ Inactive ☐ Unknown ☐ Blank
Native American Interest: ☐ Yes ☒ No

Non-NPL Status (Choose one):

☐ Not a Valid Site or Incident ☐ Not a Valid Site or Incident: NRC Lead
☐ Not a Valid Site or Incident: RCRA Lead ☒ Not a Valid Site or Incident: State Lead
☐ Not a Valid Site or Incident: Tribal Lead

Add Action: OU_00

PRE-CERCLIS SCREENING: Planned Complete: 7/12/2012

Actual Complete: 7/12/2012

Lead code (choose one)

☒ F-EPA Fund Financed ☐ FF - Federal Facility ☐ S - State, Fund Financed

SCAP Note: _____

Add below Action (if No Further Action):

OU_00 Lead: EP

☐ PRE-CERCLIS ARCHIVE

Actual Complete: ____/____/____

SCAP Note: _____

Comments: ☒ Site or ☐ Action: _____

Signatures: _____

States: Carl Sundberg Date: 7/17/12 RPM/OSC/SAM: _____

Date: ____/____/____

(NOTE: Data analysts will send form to records center after data entry and QA.)

Site Type: (Choose all that apply - for every main category chosen in bold at least one sub- category must be selected; if more than one and sub-category is selected indicate which is primary):

Primary Designation: _____

☐ **MP-Manufacturing/Processing/Maintenance** - Applicable sub-categories:

☐ CA-Chemicals and allied products
☐ CG-Coal gasification
☐ CP-Coke production
☐ EP-Electric power generation and distribution
☐ FT-Fabrics/textiles
☐ EE-Electronic/electrical equipment
☐ LW-Lumber and wood products/pulp and paper
☐ WP-Lumber and wood products/wood preserving/preserving/treatment
☐ MF-Metal fabrication/finishing/coating and allied industries
☐ OR-Oil and gas refining
☐ OP-Ordnance production
☐ PR-Plastics and rubber products
☐ PM-Primary metals/mineral processing
☐ RA-Radioactive products
☐ TA-Tanneries ☐ OT-Other-Description(needed): _____
☐ TS-Trucks/ships/trains/aircraft and related components

☐ **MI-Mining** - Applicable sub-categories

☐ CO-Coal ☐ ME-Metals ☐ NM-Non-metal minerals
☐ OG-Oil and Gas ☐ OT-Other-Description(needed): _____

☐ **WM-Waste Management** - Applicable sub-categories

☐ CL-Co-disposal landfill (municipal and industrial)
☐ ID-Illegal disposal/open dump
☐ IF-Industrial waste facility (non-generator)
☐ MD-Mine tailings disposal ☐ OT-Other-Desc.(needed): _____
☐ ML-Municipal solid waste landfill
☐ RW-Radioactive waste treatment, storage, disposal (non-generator)

☒ **OT-Other** - Applicable sub-categories

☐ AG-Agricultural (e/g., grain elevator)
☐ CS-Contaminated sediment site with no identifiable source
☐ DC-Dust control ☒ OT-Other-Desc (needed): Former Dry Cleaner
☐ GP-Ground water plume site with no identifiable source
☐ MO-Military/Other Ordinance
☐ PS-Product Storage/distribution
☐ RD-Research, development, and testing facility
☐ RC-Retail/commercial
☐ SE-Spill or other one-time event
☐ TP-Transportation (e.g., railroad yards, airport, barge docking, site)
☐ TW-Treatment works/septic tanks/other sewage treatment

☐ **RE-Recycling** - Applicable sub-categories

☐ AT-Automobiles/tires ☐ DT-Drums/tanks ☐ WO-Waste/used
☐ BS-Batteries/scrap metals/secondary smelting/precious metal recovery
☐ CC-Chemicals/chemical waste (e.g., solvent recovery)
☐ OT-Other-Description(needed): _____



REGION VII
U.S. ENVIRONMENTAL PROTECTION AGENCY

ENFORCEMENT SENSITIVE INFORMATION
FOR INTERNAL USE ONLY

LOCATION FORM - (Required information highlighted in red)

SITE NAME: Sunshine Laundry, Fort Dodge

EPA ID: _____

Latitude: 42.503510 Longitude: 94.164003
(Decimal Degree format)

Measurement Sequence: _____
(See Comment A)

Lat/Long Source: ☐ Contractor ☐ EPA Headquarters ☐ (Blank)
☐ Dun & Bradstreet ☐ Epic
☐ EPA Region 7 ☐ Other
☐ Geograph ☒ Private
☐ Other Federal Agency ☐ SNAP
☐ Regulated Entity ☐ Tribe
☐ State ☐ Unknown

Designate Lat/Long: ☒ Primary ☐ NPL Coordinate

Collection Method: ☐ Address Matching - House Number ☐ Address Matching - Block Face ☐ Address Matching - Street Centerline
☐ Address Matching - Nearest Intersection ☐ Address Matching - Primary Name ☐ Address Matching - Digitized
☐ Address Matching - Other ☐ Census Block - 1990 - Centroid ☐ Census Block/Group 1990-Centroid
☐ Census Block/Tract - 1990 - Centroid ☐ Classical Surveying Techniques ☐ Census - Other
☐ GPS Carrier Phase Static Relative Position ☐ GPS Carrier Phase Kinematic Relative Position ☐ GPS, with Canadian Active Control System
☐ GPS Code (Pseudo Range) Differential ☐ GPS Code (Pseudo Range) Precise Position ☐ GPS Code (Pseudo Range) Standard Position (SA-Off)
☐ GPS Code (Pseudo Range) Standard Position Service SA-On ☐ GPS-Unspecified ☐ Interpolation-Digital Map Source (TIGER)
☐ Interpolation-Map ☐ Interpolation - MSS ☐ Interpolation - Photo ☒ Interpolation - Satellite ☐ Interpolation - SPOT
☐ Interpolation-TM ☐ Interpolation - Other ☐ LORAN C ☐ Public Land Survey-Eighth Section ☐ Public Land Survey-Footing
☐ Public Land Survey-Quarter Section ☐ Public Land Survey-Section ☐ Public Land Survey-Sixteenth Section
☐ ZIP+2 Centroid ☐ ZIP+4 Centroid ☐ ZIP Code - Centroid ☐ Unknown

Reference Point: ☐ Administrative Building ☐ Air Monitoring Station ☐ Air Release Stack ☐ Air Release Vent
☐ Atmos. Emissions Trtmt Unit ☐ Boundary Point ☐ Building Entrance ☒ Facility/Centroid Cent ☐ Facility/Station Bldg Entrance
☐ Intake Point ☐ Lagoon or Settling Pond ☐ Liquid Waste Treatment Unit ☐ Loading Area Centroid ☐ Loading Facility
☐ Monitoring Point ☐ NE Corner of Land Parcel ☐ NW Corner of Land Parcel ☐ Other ☐ Plant Entrance (Freight)
☐ Plant Entrance (General) ☐ Plant Entrance (Personnel) ☐ Process Unit Area Centroid ☐ Process Unit ☐ SE Corner of Land Parcel
☐ Solid Waste Storage Area ☐ Solid Waste Trtmt/Disp. Unit ☐ Storage Tank ☐ SW Corner of Land Parcel ☐ Unknown
☐ Water Monitoring Station ☐ Water Release Pipe ☐ Well ☐ Well Protection Area ☐ Release Point ☐ Treatment/Storage Plant

Reference Datum: ☐ NAD27 ☒ NAD83 ☐ Other ☐ Unknown ☐ WGS84

Accuracy Meters +/-: _____ ☒ Accuracy Unknown

Collection Date: 7/12/2012

Verification Method: ☐ Ground Truth Conducted ☐ Point In Polygon (County) ☐ Blank
☐ Point in Polygon (Zip) ☐ Proximity to Alternative Facility Coordinate) ☒ Not Verified
☐ Proximity to Polygon Centroid (Other) ☐ Proximity to Polygon Centroid (Zip Code)
☐ Verified Relative to Map Features (1:100K/Tiger) ☐ Verified Relative to Map Features (1:24K)
☐ Verified Relative to Map Features (Other) ☐ Verified, Unknown Method
☐ Proximity to Polygon Centroid (County) ☐ Point in Polygon (Other)

Point/ Line/ Area: ☒ AREA ☐ LINE ☐ POINT ☐ REGION ☐ ROUTE ☐ (BLANK)

Source Map Scale: ☐ 1:10,000 ☐ 1:12,000 ☐ 1:15,840 ☐ 1:20,000 ☐ 1:24,000 ☐ 1:25,000 ☐ 1:50,000
☐ 1:62,500 ☐ 1:63,360 ☐ 1:100,000 ☐ 1:125,000 ☐ 1:250,000 ☐ 1:500,000 ☐ NONE ☒ UNKNOWN
☐ OTHER _____

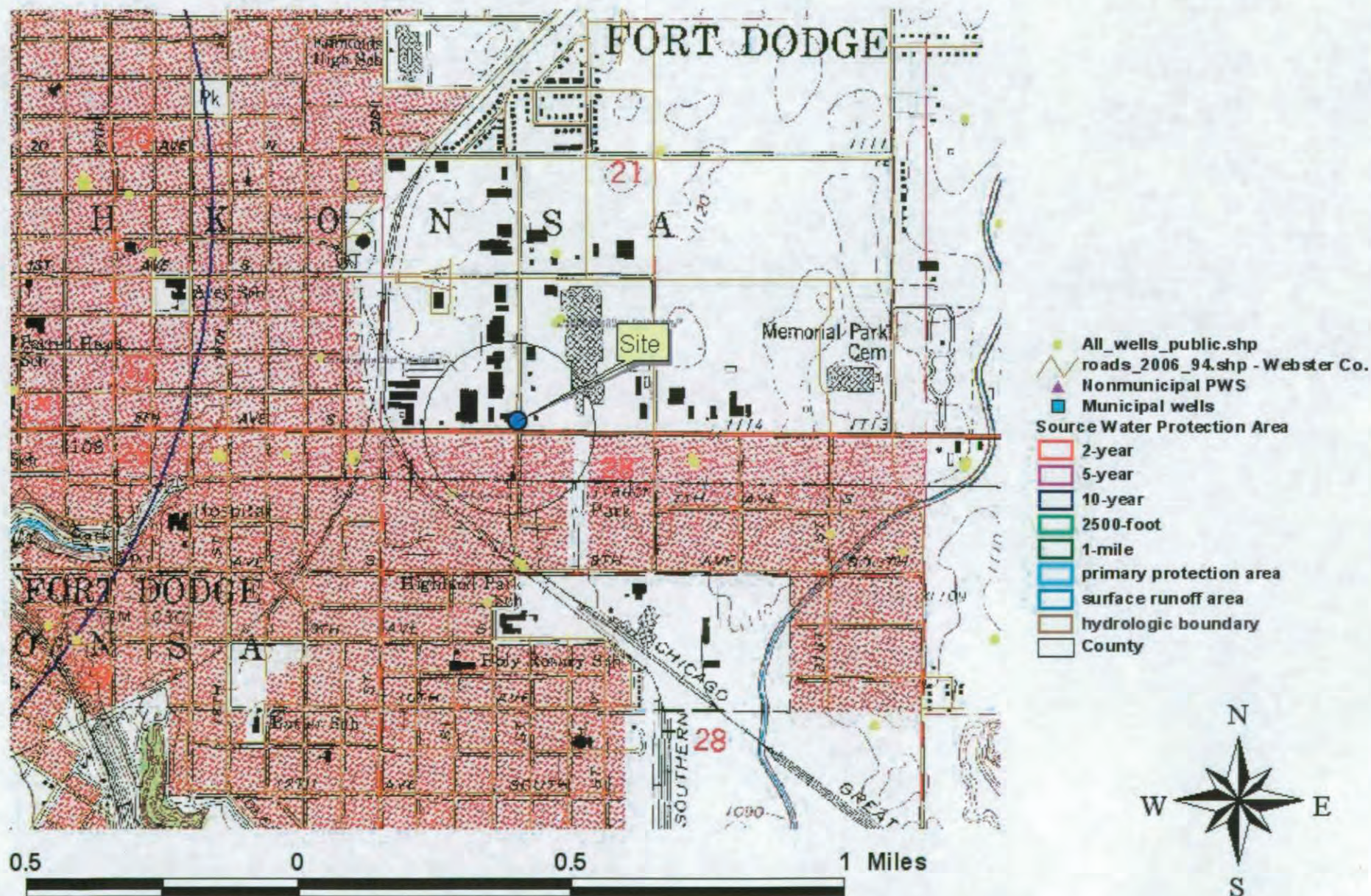
COMMENTS: _____

Signatures: _____

RPM/OSC: _____ Date: ____/____/____ BRANCH CHIEF: _____ Date: ____/____/____

A) A sequential number to indicate the order in which points on a line or area are connected. For an area, the maximum point is connected to the first. Required if the feature is polygonal or linear 3 numeric.

Sunshine Laundry, Fort Dodge





LEGEND

MW-1

APPROXIMATE MONITORING WELL LOCATION - BARKER LEMAR

BH-1

APPROXIMATE LOCATION OF BOREHOLE - INSTALLED MARCH 2008

SG-1

APPROXIMATE LOCATION OF SOIL GAS WELL - INSTALLED MARCH 2008

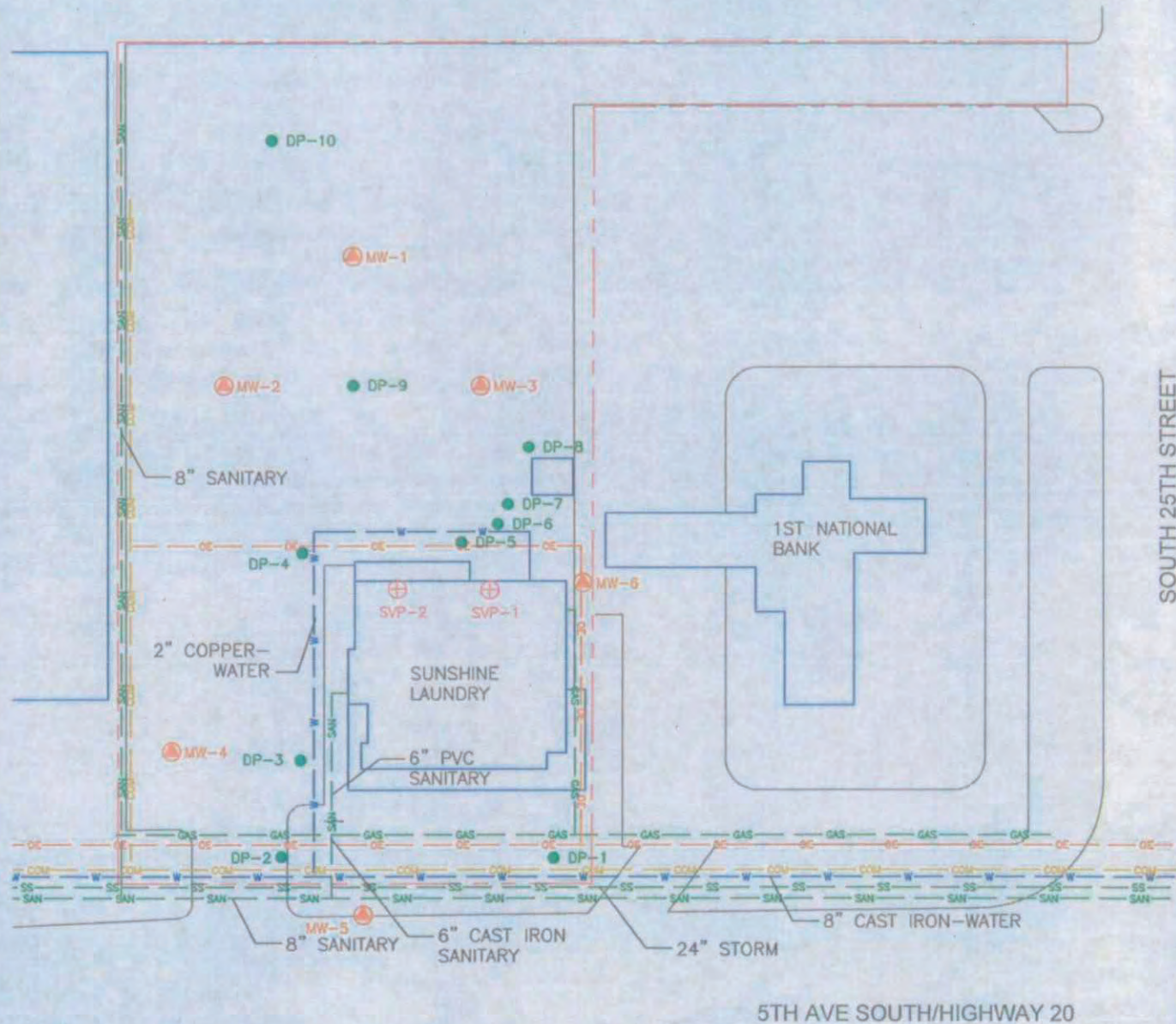
SCALE

0 50 FT.



— GAS — NATURAL GAS LINE
— COM — COMMUNICATIONS CABLE
- - - PROPERTY BOUNDARY
— OE — OVERHEAD ELECTRIC LINE

— W — WATER SUPPLY
— SAN — SANITARY SEWER
— SS — STORM SEWER



SITE MAP
SUNSHINE LAUNDRY
FORT DODGE, IOWA
PROJECT NO. SNSHN 09000
DRAWING DATE: APRIL 2010

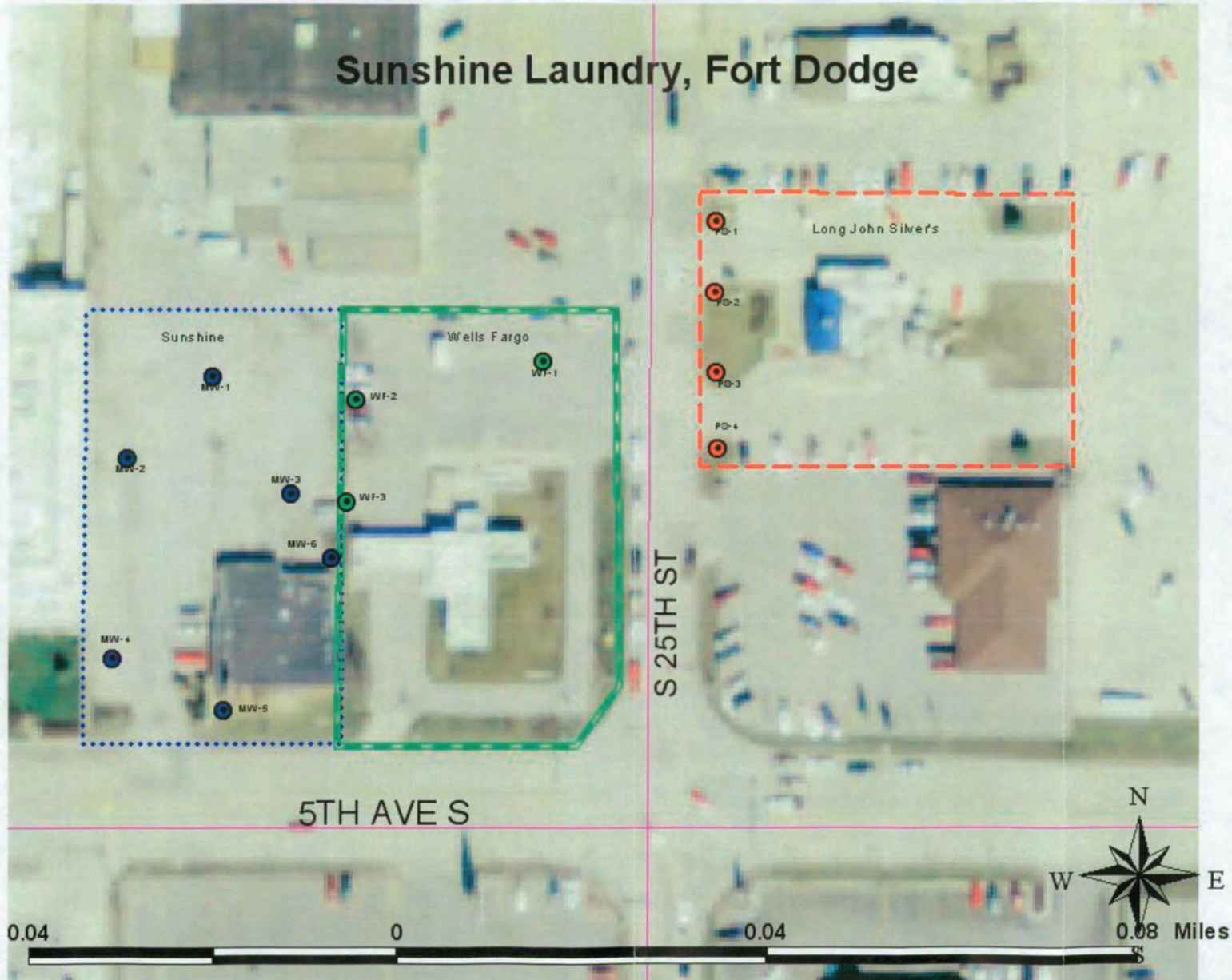
BARKER LEMAR
ENGINEERING CONSULTANTS

1801 Industrial Circle - West Des Moines, Iowa - 50265
Phone: 515.256.8814 - Fax: 515.256.0152 - www.barkerleamar.com

FIGURE

1

Sunshine Laundry, Fort Dodge



MEMORANDUM TO FILE

FROM: HYLTON JACKSON
SUBJECT: 2014 GROUNDWATER SAMPLING EVENT, SUNSHINE LAUNDRY, FORT DODGE
DATE: SEPTEMBER 24, 2014

The above referenced property site was a former dry cleaning facility which operated for approximately eight years. Dry cleaning operations had ceased by the time the property was sold to the current owners (1994). A Phase I Environmental Site Assessment (ESA) referenced EPA documents (dated 1992) that indicated waste containers of tetrachloroethene (PCE) stored in the shed on eastern portion of the site had leaked on some occasions.

A soil and groundwater Phase II ESA (dated April 15, 2008) was performed by Burns and McDonnell Engineering Company, Inc. Ten borings (DP-1 through DP-10) were advanced to depths from 20 to 26 feet below ground surface (bgs). A soil sample was collected from each boring after field screening for organic vapors using a photo ionization detector (PID). All ten soil samples were analyzed for volatile organic compounds (VOCs). A groundwater sample was collected from each boring and analyzed for VOCs. Two sub-slab vapor samples (SVP-1 and SPV-2) were collected below the slab of the main building. The soil vapor samples were analyzed for BTEX, PCE, TCE, chloroform, methylene chloride, and vinyl chloride. The concentration of PCE at SVP-1 was 170 ug/m³ and the concentration at SPV-2 was 630,000 ug/m³. If the 10 per cent attenuation factor is used for the concentration of 630,000 ug/m³ and the sample run through Department's LRP Cumulative Risk Calculator, that sample would grossly exceed all exposure scenarios (site resident, site worker, and construction worker). Results from this assessment indicated that soil and groundwater had been significantly impacted by the past release of PCE and there is a potential for significant impact to indoor air in the onsite building.

The Department required an additional assessment and the environmental consultants, Barker Lemar, conducted a Site Assessment and prepared a Remedial Action Plan (report dated June 2010). Six borings (MW-1 through MW-6) had been advanced onsite to depths from 10 to 20 feet bgs and each was converted to a permanent monitoring well. A soil sample was collected from borings MW-1, MW-2, MW-3, and MW-6 after field screening for organic vapors using a photo ionization detector (PID). All four soil samples were analyzed for PCE; TCE; cis-1,2-DCE; trans-1,2-DCE; and Vinyl Chloride. A groundwater sample was collected from each of the six permanent monitoring wells and analyzed for PCE; TCE; cis-1,2-DCE; trans-1,2-DCE; and Vinyl Chloride. The Barker Lemar site assessment did not fully define the extent of the chlorinated groundwater plume.

The Department obtained access permission from the Wells Fargo property that lies directly east of the Sunshine Laundry property. On December 6, 2010, the Department advanced three Geoprobe® screenpoint borings to depths of 15 to 19 feet bgs in the Wells Fargo parking lot and a groundwater sample was collected from each boring. Groundwater samples were also collected from five of the six permanent wells on the Sunshine laundry property. Monitoring well MW-3 could not be located. All groundwater samples were analyzed for PCE; TCE; cis-1,2-DCE; trans-1,2-DCE; and Vinyl Chloride.

On May 18, 2011, the Department obtained access permission for the Long John Silver's property that lies east of South 25th Street and east of the Wells Fargo property. Four Geoprobe® screenpoint borings were advanced to depths of 15 to 19 feet bgs on the Long John Silver's property. A groundwater sample was collected from two borings, PS-1 and PS-2. Borings PS-3 and PS-4 did not yield water. Groundwater samples were also collected from the six permanent wells on the Sunshine Laundry property. All groundwater samples were analyzed for PCE; TCE; 1,2-DCE (total); and Vinyl Chloride.

On December 19, 2011 the Department collected a of groundwater samples from the six permanent monitoring wells that remain on the Sunshine Laundry property. The groundwater samples were analyzed for PCE; TCE; cis-1,2-DCE; trans-1,2-DCE; and vinyl chloride.

On August 28, 2014 the Contaminated Sites Section collected another round of groundwater samples from the onsite wells at the sunshine Laundry property. Five of the six wells were sampled (monitoring well MW-3 could not be located). The groundwater samples were submitted for laboratory analysis if VOCs. All current and historic groundwater results are listed in the attached **TABLE 1**. Relative elevations of the well top of casings (TOC) were determined and static water levels were noted before sampling. Groundwater flow on the northern half of the property was determined to be toward the north/northeast (+39°). Groundwater flow on the southern half of the property was determined to be toward the south/southeast (+157°). Significant groundwater contamination remains onsite. While current conditions onsite may not present unacceptable risks, any future redevelopment will have to take into account potential solid waste issues (in the event of excavation) and potential VI issues in existing or new structures located onsite. A letter was sent to the current owner on September 24, 2014 (see attached) summarizing the Department's position on the site.

TABLE 1

All units in ug/l. Exceedances in **BOLD**

Sample Location	Date	PCE	TCE	trans-1,2-DCE	cis-1,2-DCE	Vinyl Chloride
MW-1	1/19/2010	2.8	6	3.7	20.1	ND
	12/6/2010	ND	7	ND	18	ND
	5/18/2011	ND	ND	ND	8	ND
	12/19/2011	ND	5	*	9*	ND
	8/28/2014	ND	ND	*	11*	ND
MW-2	1/19/2010	57.8	10.8	13.7	46.8	ND
	12/6/2010	350	89	85	400	ND
	5/18/2011	690	230	120	500	26
	12/19/2011	790	200	*	640*	67
	8/28/2014	2,300	290	*	760*	26
MW-3	1/19/2010	1,970	281	518	1,110	6.2
	12/6/2010	NS	NS	NS	NS	NS
	5/18/2011	4,000	360	590	1,100	11
	12/19/2011	3700	420	*	1,500*	11
	8/28/2014	NS	NS	NS	NS	NS
MW-4	1/19/2010	7.3	1.1	1.4	2.9	ND
	12/6/2010	22	ND	ND	ND	ND
	5/18/2011	ND	ND	ND	ND	ND
	12/19/2011	ND	ND	ND*	ND*	ND
	8/28/2014	ND	ND	ND*	ND*	ND
MW-5	4/22/2010	111	4.5	ND	ND	ND
	12/6/2010	160	14	ND	ND	ND
	5/18/2011	160	20	ND	8	ND
	12/19/2011	190	13	ND*	ND*	ND
	8/28/2014	170	9	*	7*	ND
MW-6	4/22/2010	75.3	5.1	2.5	3.5	ND
	12/6/2010	100	17	10	33	ND
	5/18/2011	67	6	ND	8	ND
	12/19/2011	110	15	*	11*	ND
	8/28/2014	97	8	*	9*	ND
WF-1	12/6/2010	130	270	170	1,100	ND
WF-2	12/6/2010	400	210	180	430	ND
WF-3	12/6/2010	1,000	310	650	1,300	ND
PS-1	5/18/2011	ND	ND	ND	ND	ND
PS-2	5/18/2011	ND	ND	ND	ND	ND
Statewide Standard		5	5	100	70	2

*Concentrations of cis-1,2-DCE and trans-1,2-DCE were combined and reported as total 1,2-DCE in 12/19/2011 sampling event. This table lists that total concentration as cis-1,2-DCE, the compound with the lower Statewide Standard.

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	5/18/2011	4,000	360	590	1,100	11
	12/19/2011	3700	420	*	1,500*	11
	8/28/2014	NS	NS	NS	NS	NS
MW-4	1/19/2010	7.3	1.1	1.4	2.9	ND
	12/6/2010	22	ND	ND	ND	ND
	5/18/2011	ND	ND	ND	ND	ND
	12/19/2011	ND	ND	ND*	ND*	ND
	8/28/2014	ND	ND	ND*	ND*	ND
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	12/6/2010	160	14	ND	ND	ND
	5/18/2011	160	20	ND	8	ND
	12/19/2011	190	13	ND*	ND*	ND
	8/28/2014	170	9	*	7*	ND
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	12/6/2010	100	17	10	33	ND
	5/18/2011	67	6	ND	8	ND
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WF-3	12/6/2010	1,000	310	650	1,300	ND
PS-1	5/18/2011	ND	ND	ND	ND	ND
PS-2	5/18/2011	ND	ND	ND	ND	ND
Statewide Standard		5	5	100	70	2

*Concentrations of cis-1,2-DCE and trans-1,2-DCE were combined and reported as total 1,2-DCE in 12/19/2011 sampling event. This table lists that total concentration as cis-1,2-DCE, the compound with the lower Statewide Standard.



State Hygienic Laboratory

The University of Iowa

HYLTON JACKSON
IDNR CONTAMINATED SITES
LAND QUALITY BUREAU
502 E 9TH STREET
DES MOINES, IA 50319-0034

Accession Number	187630
Date Sample Finalized	2014-09-03 11:03
Date Received	2014-08-29 10:00
Sample Source	Non-Drinking Water
Project	WMSF
Date Collected	2014-08-28 13:35
Collection Site	fdmwl
Collection Town	
Sample Description	ground water
Client Reference	sunshine laundry
Collector	jackson hylton
Phone	515/242-5084

Note: Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

Results of Analyses

GCMS Volatiles, EPA 8260

Units	ug/L
Date Analyzed	2014-09-02 08:41
Analyst	LJL

Analyzed In	Coralville
Date Verified	2014-09-03 11:03
Verifier	TGC

Analyte	Result	Quant Limit
Chloromethane	<5	5
Bromomethane	<5	5
Vinyl chloride	<5	5
Chloroethane	<5	5
Methylene chloride	<5	5
Methyl-t-butyl ether (MtBE)	<5	5
Acetone	<5	5
Carbon disulfide	<5	5
1,1-Dichloroethene	<5	5
1,1-Dichloroethane	<5	5
Total 1,2-Dichloroethenes	13	5
Chloroform	<5	5
1,2-Dichloroethane	<5	5
2-Butanone	<5	5
1,1,1-Trichloroethane	<5	5
Carbon tetrachloride	<5	5
Bromodichloromethane	<5	5
1,2-Dichloropropane	<5	5
cis-1,3-Dichloropropene	<5	5
Trichloroethene	<5	5
Dibromochloromethane	<5	5
1,1,2-Trichloroethane	<5	5
Benzene	<5	5
trans-1,3-Dichloropropene	<5	5
Bromoform	<5	5
4-Methyl-2-pentanone	<5	5
2-Hexanone	<5	5

Page 1 of 2

Michael D. Wichman, Ph.D.
Associate Director
<http://www.shl.uiowa.edu>
University of Iowa Research Park
2490 Crosspark Road
Coralville, IA 52241
319/335-4500 Fax: 319/335-4555

Lakeside Laboratory
1838 Highway 86
Milford, IA 51351
712/337-3669 ext. 6 Fax: 712/337-0227

Iowa Laboratories Complex
2220 S. Ankeny Blvd
Ankeny, IA 50023
515/725-1600 Fax: 515/725-1642



State Hygienic Laboratory

The University of Iowa

Accession Number | 187630

Analyte	Result	Quant Limit
Tetrachloroethene	<5	5
1,1,2,2-Tetrachloroethane	<5	5
Toluene	<5	5
Chlorobenzene	<5	5
Ethylbenzene	<5	5
Styrene	<5	5
Total Xylenes	<5	5

Description of Units used within this report

ug/L = Micrograms per Liter

The result(s) of this report relate only to the items analyzed. This report shall not be reproduced except in full without the written approval of the laboratory.

Iowa Environmental Laboratory IDs are: Ankeny #397, Iowa City/Coralville #027, Lakeside #393.

If you have any questions, please call Client Services at 800/421-IOWA (4692) or 319/335-4500. Thank you.



State Hygienic Laboratory

The University of Iowa

HYLTON JACKSON
IDNR CONTAMINATED SITES
LAND QUALITY BUREAU
502 E 9TH STREET
DES MOINES, IA 50319-0034

Accession Number	187631
Date Sample Finalized	2014-09-03 11:05
Date Received	2014-08-29 10:00
Sample Source	Non-Drinking Water
Project	WMSF
Date Collected	2014-08-28 13:25
Collection Site	fdmw2
Collection Town	
Sample Description	ground water
Client Reference	sunshine laundry
Collector	jackson hylton
Phone	515/242-5084

Note: Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

Results of Analyses

GCMS Volatiles, EPA 8260

Units	ug/L
Date Analyzed	2014-09-02 09:07
Analyst	LJL

Analyzed In	Coralville
Date Verified	2014-09-03 11:05
Verifier	TGC

Analyte	Result	Quant Limit
Chloromethane	<5	5
Bromomethane	<5	5
Vinyl chloride	26	5
Chloroethane	<5	5
Methylene chloride	<5	5
Methyl-t-butyl ether (MtBE)	<5	5
Acetone	<5	5
Carbon disulfide	<5	5
1,1-Dichloroethene	<5	5
1,1-Dichloroethane	<5	5
Total 1,2-Dichloroethenes	760	5
Chloroform	<5	5
1,2-Dichloroethane	<5	5
2-Butanone	<5	5
1,1,1-Trichloroethane	<5	5
Carbon tetrachloride	<5	5
Bromodichloromethane	<5	5
1,2-Dichloropropane	<5	5
cis-1,3-Dichloropropene	<5	5
Trichloroethene	290	5
Dibromochloromethane	<5	5
1,1,2-Trichloroethane	<5	5
Benzene	<5	5
trans-1,3-Dichloropropene	<5	5
Bromoform	<5	5
4-Methyl-2-pentanone	<5	5
2-Hexanone	<5	5



State Hygienic Laboratory

The University of Iowa

Accession Number | 187631

Analyte	Result	Quant Limit
Tetrachloroethene	2300	5
1,1,2,2-Tetrachloroethane	<5	5
Toluene	<5	5
Chlorobenzene	<5	5
Ethylbenzene	<5	5
Styrene	<5	5
Total Xylenes	<5	5

Description of Units used within this report
ug/L = Micrograms per Liter

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State Hygienic Laboratory

The University of Iowa

HYLTON JACKSON
IDNR CONTAMINATED SITES
LAND QUALITY BUREAU
502 E 9TH STREET
DES MOINES, IA 50319-0034

Accession Number	187632
Date Sample Finalized	2014-09-03 11:05
Date Received	2014-08-29 10:00
Sample Source	Non-Drinking Water
Project	WMSF
Date Collected	2014-08-28 14:30
Collection Site	fdmw4
Collection Town	
Sample Description	ground water
Client Reference	sunshine laundry
Collector	jackson hylton
Phone	515/242-5084

Note: Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

Results of Analyses

GCMS Volatiles, EPA 8260

Units	ug/L
Date Analyzed	2014-09-02 12:09
Analyst	LJL

Analyzed In	Coralville
Date Verified	2014-09-03 11:05
Verifier	TGC

Analyte	Result	Quant Limit
Chloromethane	<5	5
Bromomethane	<5	5
Vinyl chloride	<5	5
Chloroethane	<5	5
Methylene chloride	<5	5
Methyl-t-butyl ether (MtBE)	<5	5
Acetone	<5	5
Carbon disulfide	<5	5
1,1-Dichloroethene	<5	5
1,1-Dichloroethane	<5	5
Total 1,2-Dichloroethenes	<5	5
Chloroform	<5	5
1,2-Dichloroethane	<5	5
2-Butanone	<5	5
1,1,1-Trichloroethane	<5	5
Carbon tetrachloride	<5	5
Bromodichloromethane	<5	5
1,2-Dichloropropane	<5	5
cis-1,3-Dichloropropene	<5	5
Trichloroethene	<5	5
Dibromochloromethane	<5	5
1,1,2-Trichloroethane	<5	5
Benzene	<5	5
trans-1,3-Dichloropropene	<5	5
Bromoform	<5	5
4-Methyl-2-pentanone	<5	5
2-Hexanone	<5	5

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Michael D. Wichman, Ph.D.

Associate Director

<http://www.shl.uiowa.edu>

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Iowa Laboratories Complex

2220 S. Ankeny Blvd

Ankeny, IA 50023

515/725-1600 Fax: 515/725-1642



State Hygienic Laboratory

The University of Iowa

Accession Number | 187632

Analyte	Result	Quant Limit
Tetrachloroethene	<5	5
1,1,2,2-Tetrachloroethane	<5	5
Toluene	<5	5
Chlorobenzene	<5	5
Ethylbenzene	<5	5
Styrene	<5	5
Total Xylenes	<5	5

Description of Units used within this report

ug/L = Micrograms per Liter

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State Hygienic Laboratory

The University of Iowa

HYLTON JACKSON
IDNR CONTAMINATED SITES
LAND QUALITY BUREAU
502 E 9TH STREET
DES MOINES, IA 50319-0034

Accession Number	187633
Date Sample Finalized	2014-09-03 11:06
Date Received	2014-08-29 10:00
Sample Source	Non-Drinking Water
Project	WMSF
Date Collected	2014-08-28 15:15
Collection Site	fdmw5
Collection Town	
Sample Description	ground water
Client Reference	sunshine laundry
Collector	jackson hylton
Phone	515/242-5084

Note: Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

Results of Analyses

GCMS Volatiles, EPA 8260

Units	ug/L
Date Analyzed	2014-09-02 12:35
Analyst	LJL

Analyzed In	Coralville
Date Verified	2014-09-03 11:06
Verifier	TGC

Analyte	Result	Quant Limit
Chloromethane	<5	5
Bromomethane	<5	5
Vinyl chloride	<5	5
Chloroethane	<5	5
Methylene chloride	<5	5
Methyl-t-butyl ether (MtBE)	<5	5
Acetone	<5	5
Carbon disulfide	<5	5
1,1-Dichloroethene	<5	5
1,1-Dichloroethane	<5	5
Total 1,2-Dichloroethenes	7	5
Chloroform	<5	5
1,2-Dichloroethane	<5	5
2-Butanone	<5	5
1,1,1-Trichloroethane	<5	5
Carbon tetrachloride	<5	5
Bromodichloromethane	<5	5
1,2-Dichloropropane	<5	5
cis-1,3-Dichloropropene	<5	5
Trichloroethene	9	5
Dibromochloromethane	<5	5
1,1,2-Trichloroethane	<5	5
Benzene	<5	5
trans-1,3-Dichloropropene	<5	5
Bromoform	<5	5
4-Methyl-2-pentanone	<5	5
2-Hexanone	<5	5

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State Hygienic Laboratory

The University of Iowa

Accession Number | 187633

Analyte	Result	Quant Limit
Tetrachloroethene	170	5
1,1,2,2-Tetrachloroethane	<5	5
Toluene	<5	5
Chlorobenzene	<5	5
Ethylbenzene	<5	5
Styrene	<5	5
Total Xylenes	<5	5

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HYLTON JACKSON
IDNR CONTAMINATED SITES
LAND QUALITY BUREAU
502 E 9TH STREET
DES MOINES, IA 50319-0034

Accession Number	187634
Date Sample Finalized	2014-09-03 11:06
Date Received	2014-08-29 10:00
Sample Source	Non-Drinking Water
Project	WMSF
Date Collected	2014-08-28 14:00
Collection Site	fdmw6
Collection Town	
Sample Description	ground water
Client Reference	sunshine laundry
Collector	jackson hylton
Phone	515/242-5084

Note: Upon arrival, sample met container and preservation requirements for the analysis requested. Please review carefully your sample results for additional analyte comments or method exceptions.

Results of Analyses

GCMS Volatiles, EPA 8260

Units	ug/L
Date Analyzed	2014-09-02 10:25
Analyst	LJL

Analyzed In	Coralville
Date Verified	2014-09-03 11:06
Verifier	TGC

Analyte	Result	Quant Limit
Chloromethane	<5	5
Bromomethane	<5	5
Vinyl chloride	<5	5
Chloroethane	<5	5
Methylene chloride	<5	5
Methyl-t-butyl ether (MtBE)	<5	5
Acetone	10	5
Carbon disulfide	<5	5
1,1-Dichloroethene	<5	5
1,1-Dichloroethane	<5	5
Total 1,2-Dichloroethenes	9	5
Chloroform	<5	5
1,2-Dichloroethane	<5	5
2-Butanone	<5	5
1,1,1-Trichloroethane	<5	5
Carbon tetrachloride	<5	5
Bromodichloromethane	<5	5
1,2-Dichloropropane	<5	5
cis-1,3-Dichloropropene	<5	5
Trichloroethene	8	5
Dibromochloromethane	<5	5
1,1,2-Trichloroethane	<5	5
Benzene	<5	5
trans-1,3-Dichloropropene	<5	5
Bromoform	<5	5
4-Methyl-2-pentanone	<5	5
2-Hexanone	<5	5

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Ankeny, IA 50023
515/725-1600 Fax: 515/725-1642



State Hygienic Laboratory

The University of Iowa

Accession Number | 187634

Analyte	Result	Quant Limit
Tetrachloroethene	97	5
1,1,2,2-Tetrachloroethane	<5	5
Toluene	<5	5
Chlorobenzene	<5	5
Ethylbenzene	<5	5
Styrene	<5	5
Total Xylenes	<5	5

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STATE OF IOWA

TERRY E. BRANSTAD, GOVERNOR
KIM REYNOLDS, LT. GOVERNOR

DEPARTMENT OF NATURAL RESOURCES
CHUCK GIPP, DIRECTOR

September 24, 2014

Jyoti Raval
Sunshine Company LC
2716 Bittersweet Pl
Burlington, IA 52601

Re: August 28, 2014 groundwater sampling event at the Sunshine Laundry, 2422 5th Avenue
South, Fort Dodge, Iowa

Dear Ms. Raval:

I am writing to provide you with an update on the Department's review of the regulatory status of the above referenced property which was a former dry cleaning facility that operated for approximately eight years. Dry cleaning operations had ceased by the time the property was sold to the current owners (1994). A Phase I Environmental Site Assessment (ESA) referenced EPA documents (dated 1992) that indicated waste containers of tetrachloroethene (PCE) stored in the shed on eastern portion of the site had leaked on some occasions. Subsequent Phase II ESAs have established that soil and groundwater (both onsite and at neighboring properties) have been impacted by chlorinated solvents. A potential vapor intrusion (VI) issue in the existing onsite building has been identified in the past. Details of these past environmental assessments are available on the Department's database at;

<https://programs.iowadnr.gov/contaminatedsites/pages/addEditSite.aspx?siteID=1234>

On August 28, 2014 the Contaminated Sites Section collected another round of groundwater samples from the onsite wells at the Sunshine Laundry property. Five of the six wells were sampled (monitoring well MW-3 could not be located). The groundwater samples were submitted for laboratory analysis of volatile organic compounds (VOCs). Those sample results indicate that the onsite environmental conditions have not changed significantly in the past five years. Under current site use and conditions, the Department is suspending any further requirements for continued monitoring of the referenced groundwater contaminants. Regardless of these results, groundwater contamination remains onsite. While current site use (as a commercial building and paved parking) and environmental conditions may not present unacceptable risks, any change in use could raise potential solid waste issues (in the event of excavation) and potential VI issues in existing or new structures located onsite. Any change in the configuration of the existing, onsite impermeable cover (paved area and building footprint) could change rain water infiltration rates or patterns and may have the possibility of mobilizing the groundwater plume. This does not mean that the current paved area and onsite building must remain untouched just as long as the surface of the area remains impervious to rain water infiltration.

Any future redevelopment that would constitute a change in use should include plans as to how these environmental concerns will be addressed and managed. Feel free to contact me if there are any questions, comments, or concerns at 515 242 5084.

Sincerely,

A handwritten signature in black ink, appearing to read 'Hylton Jackson', written in a cursive style.

Hylton Jackson
Contaminated Sites Section
Iowa Department of Natural Resources

Cc; Cal Lundberg, Supervisor, Contaminated Sites Section, IDNR
Mr. Mel Pins, IDNR Brownfields Coordinator
IDNR Field Office #2
Vickie Reeck, Community Development Manager, City of Fort Dodge
819 1st Ave South, Fort Dodge, IA 50501